

AGRICULTURAL OUTLOOK

Economic Research Service
United States Department of Agriculture

May 1991



*Farm Equipment
Sales Head Higher*

May 1991/AO-174

AGRICULTURAL OUTLOOK



Departments

- 2 Agricultural Economy
Farm Investments To Rise?
- 12 Commodity Spotlight
Pork Price Spread Sets Record
California's Sugarbeet Industry Under Stress
- 16 World Agriculture and Trade
Australian Sheep Industry Under Siege
East European Reform Accelerates
U.S.-EC Trade Disputes Create Tension
- 23 Resources
Farmland Values Rise 2 Percent
Farm Machinery Purchases To Pick Up

Special Articles

- 26 "Net Value Added" Gauges Farming's Contribution to the Economy
- 30 Climate Change Could Cause Shifts In Production

Statistical Indicators

- | | |
|-----------------------------------|------------------------------------|
| 36 Summary | 51 World Agriculture |
| 37 U.S. and Foreign Economic Data | 52 U.S. Agricultural Trade |
| 38 Farm Prices | 55 Farm Income |
| 39 Producer and Consumer Prices | 59 Food Expenditures |
| 41 Farm-Retail Price Spreads | 59 Transportation |
| 42 Livestock and Products | 60 Indicators of Farm Productivity |
| 46 Crops and Products | |

Economics Editor—Nathan W. Childs (202) 219-0313

Associate Editors—Joy L. Harwood (202) 219-0840
Lawrence K. Glaser (202) 219-0888

Managing Editor—Diane E. Decker (202) 219-0494

Statistical Coordinator—Ann Duncan (202) 219-0313

Design & Layout Coordinator—Victor B. Phillips, Jr.

Production Staff—Karen Sayre and Clota Peterson

Composition—Joyce Bailey

The contents of this magazine have been approved by the World Agricultural Outlook Board, and the summary was released April 18, 1991. Price and quantity forecasts for crops are based on the April 10 World Agricultural Supply and Demand Estimates.

Materials may be reprinted without permission. *Agricultural Outlook* is printed monthly except for the January-February combined issue.

Annual subscription: \$26 U.S., \$32.50 foreign (includes Canada). Order from ERS-NASS, P.O. Box 1608, Rockville, MD 20849-1608. Or call, toll free, 1-800-999-6779 (8:30-5:00 E.T.). Make check payable to ERS-NASS.

Time to renew? Your subscription to *Agricultural Outlook* expires in the month and year shown on the top line of your address label. Renew by calling 1-800-999-6779.

The next issue of *Agricultural Outlook* (AO-175) is scheduled for mailing on June 4, 1991. If you do not receive AO-175 by June 18, call the managing editor at (202) 219-0494 (be sure to have your mailing label handy). The full text of AO-175 will also be distributed electronically; additional information on this is available at (202) 447-5505.

News of Farm Equipment Purchases, Farmland Values, East European Reform, Australian Sheep, and Global Warming

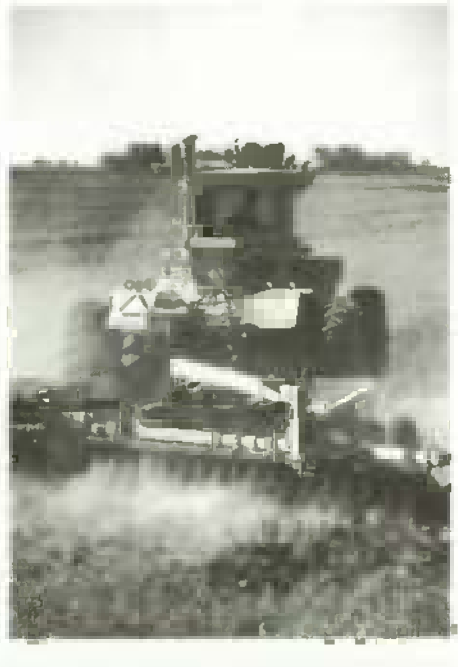
Unit sales of tractors and farm machinery in 1991 are expected to rise an average of 4 percent from a year earlier. Several factors point toward a sustained increase in investment in equipment. These include the strengthening of farmers' financial positions, lower cost and expanding availability of credit, an aging stock of capital equipment, and higher real rates of return on farm assets.

Despite the anticipated growth in farm investment, equipment purchases may be limited by fewer acres eligible for government payments and farmers' caution about assuming more debt.

Improved financial conditions in the farm sector contributed to a 2-percent gain in U.S. farmland values in 1990. Values rose for the fourth straight year to an average of \$682 per acre in January 1991. However, average farmland values were still 17 percent below the record \$823 per acre in 1982. After adjusting for inflation, average farmland values fell 2 percent in 1990.

California was the first state to commercially grow sugarbeets and remains a major producer. However, the state's acreage is declining due to disease, drought, and the existence of many profitable alternatives. Area planted to sugarbeets in 1991 is projected to be down 13 percent from a year earlier and 30 percent from 1988. Most of the state's sugarbeet processing facilities will operate below capacity this year.

The *Prospective Plantings* report released on March 28 provides information on how farmers are reacting to the new farm flexibility provisions and to changes in Acreage Reduction Program requirements. The report indicates that corn and sorghum plantings will be up in 1991, but oats area is likely to slip to an



alltime low. Soybean growers are expected to plant the smallest area since 1976, and wheat area also will be down. The drought in California has reduced rice and cotton plantings.

Agricultural policy reform in Eastern Europe reached new heights in 1990 and early 1991. Governments no longer set production targets, letting farmers choose production based largely on market-determined prices. In addition, administrative price policies are disappearing rapidly.

Most East European countries view the shift toward market forces as their major reform. Important goals include the introduction of property rights, privatization of state-owned enterprises, establishment of currency convertibility, and more open trade. However, implementation of these reform measures varies considerably across countries.

The suspension of the Australian Reserve Price Scheme for wool on February 11, 1991, and a flock reduction

scheme are causing Australian farmers to slaughter millions of sheep. Over the last year, Australia's wool prices have plummeted 50 percent.

Because Australia traditionally supplies 60 percent of the world's fine wool trade, its minimum reserve price served as a world price floor. The virtual doubling of this minimum reserve price between 1985 and 1989 led to an imbalance in world markets, a massive accumulation of Australian wool stocks, and a 13-percent increase in sheep inventories.

Net value added measures the income that farming generates for producers and others who provide land, labor, and financing. Survey data show that in 1989, agriculture generated more than \$2 in net value added for each dollar of net income. In total, cow-calf operators accounted for the largest share of net value added. Based on per dollar of gross income, vegetable growers generated the most net value added.

Agriculture has the potential to both contribute to global climate change and to be affected by it. While there is great uncertainty about aspects of global climate change, current climate change models and climate limitations on crop production suggest that global warming over the next 60 years would cause lower yields for major grains and soybeans in the contiguous U.S. and Western Europe. More northern latitudes would experience enhanced yields and longer growing seasons.

If global warming occurs, shifts in agricultural production are expected over the next several decades. However, the net economic impact likely will be moderated by a mix of yield increases and decreases across the globe. Adjustment costs will be associated with these shifts.

Agricultural Economy



Farm Investments To Rise?

Several factors point toward increased purchases of farm equipment in the near future. They include the strengthening of farmers' financial positions, lower cost and expanding availability of credit, an aging stock of capital equipment, and higher real rates of return on farm assets.

Factors likely to limit purchases, on the other hand, are reduced acres eligible for price support, higher risk associated with more market-oriented agriculture, and farmers' caution about assuming more debt.

Net Cash Flow Up From Mid-1980's

The growth in net cash flow after interest expense—which reflects the funds available to farm investors to purchase land and other capital investments—has enhanced farmers' financial positions. Cash flow after interest, in constant 1982 dollars, was \$38 billion in 1989 and is estimated to have risen to \$39 billion in 1990, higher than the 1980-86 average of \$33.8 billion.

The growth in cash flow after interest reflects decreased capital expenditures, lower interest expenses, and decreased net loan repayments. Interest rates are lower and farmers have paid off a significant amount of debt.

Other factors, encompassing both the supply and demand for credit, may also contribute to the growth in farm capital expenditures.

More Credit Available, And At Lower Cost

On the supply side, farm capital expenditures may be up because more credit is available at lower cost. Farm lenders, especially commercial banks, are showing signs of excess capacity. Creditworthy farmers seeking to expand will be able to secure financing on more favorable terms in 1991 than a year ago.

And conditions in national credit markets may affect conditions in the farm sector. To stimulate the supply of loanable funds, the Federal Reserve has cut the discount rate and allowed the federal funds rate to fall from 8.25 percent last September to 6.25 percent this February. The Fed's action may promote a rebound in interest- and credit-sensitive spending

—including farm equipment purchases and other capital investments.

In addition, real estate investment firms and life insurance companies are becoming more active in farm real estate markets. Also, there is increased seller and equity financing, and some machinery equipment dealers are providing credit.

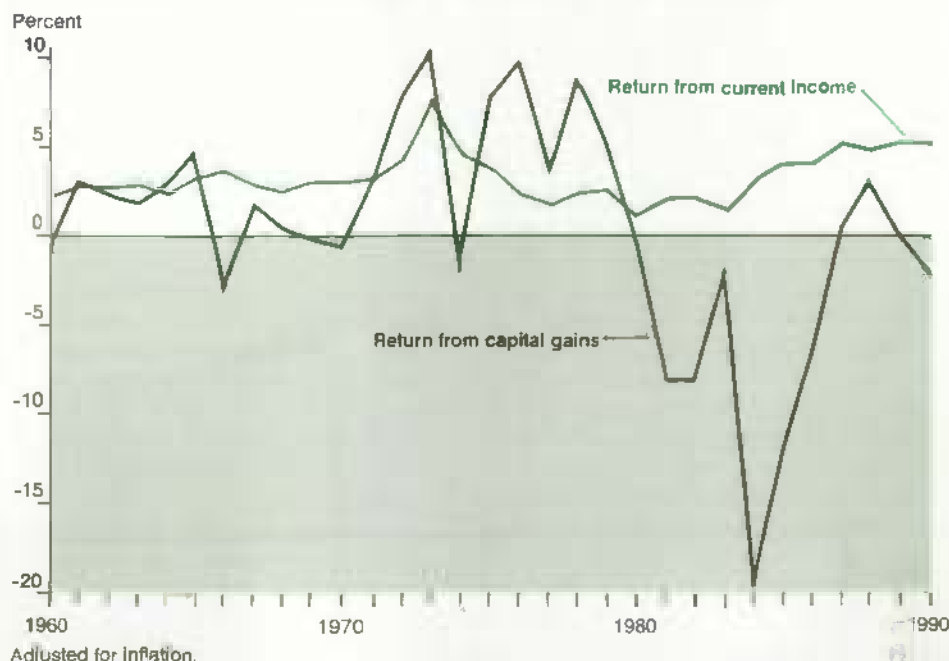
The net result is likely to be an increased availability of loanable funds to sound farm operators.

Replacement Demand May Offset Cautiousness

On the demand side, farmers' caution about taking on additional debt may limit the demand for credit. Farmland values have risen slowly since 1987 (see the Resource article on farmland values). Farm income is forecast to drop slightly in 1991 as planted acreage declines slightly, fewer acres are eligible for price supports, and livestock supplies grow modestly. The recession may also cause investor wariness.

However, replacement demand may offset farmers' cautiousness. For example, the diversion of cash income for interest expenses and debt repayment during the

Current Income Provides an Improved Rate of Return to Farm Assets

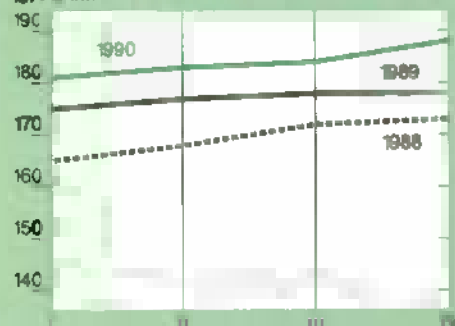


Prime Indicators

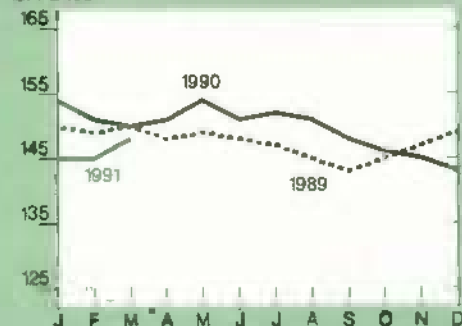
Agricultural Economy

Index of prices paid by farmers

1977 = 100

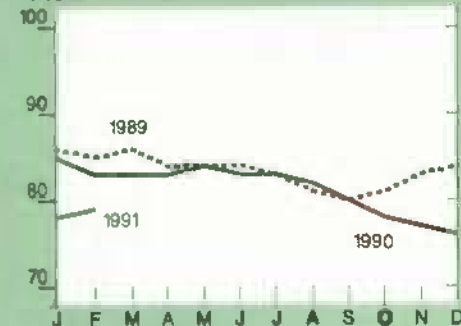
Index of prices received by farmers¹

1977 = 100

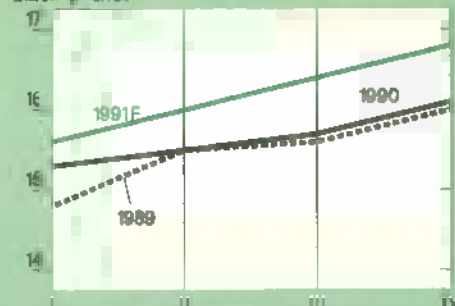


Ratio of prices received/prices paid

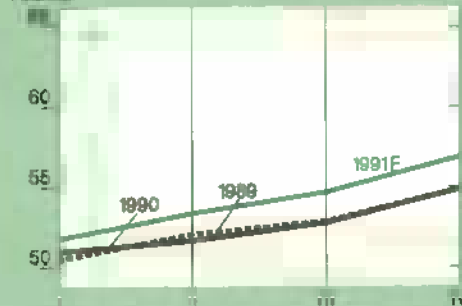
Percent

Total red meat & poultry production²

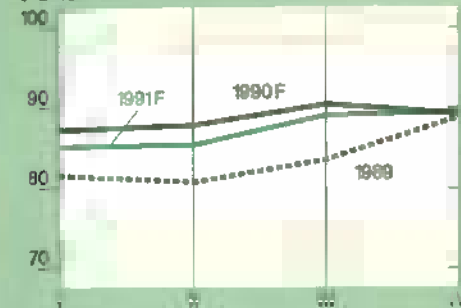
Billion pounds

Red meat & poultry consumption, per capita^{2,3}

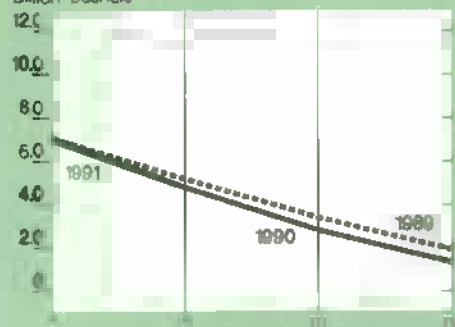
Pounds

Cash receipts from livestock & products⁴

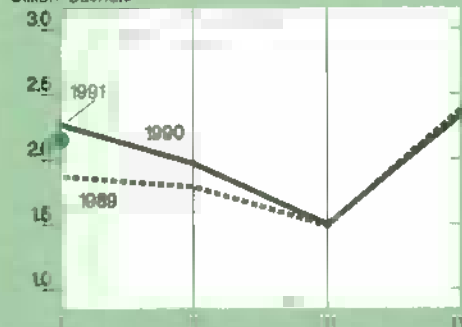
\$ billion

Corn beginning stocks⁵

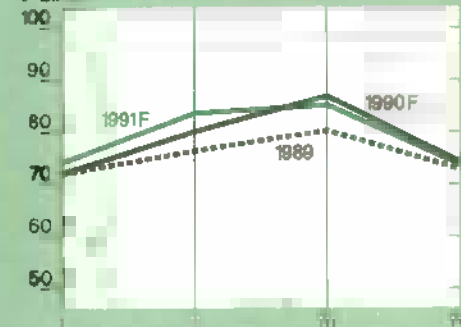
Billion bushels

Corn disappearance⁵

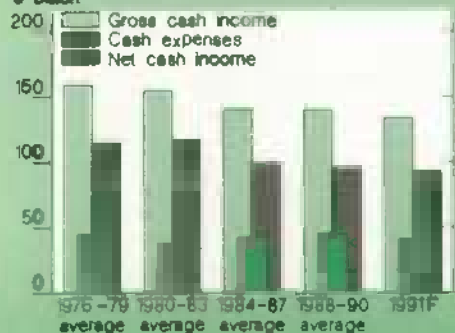
Billion bushels

Cash receipts from crops⁴

\$ billion

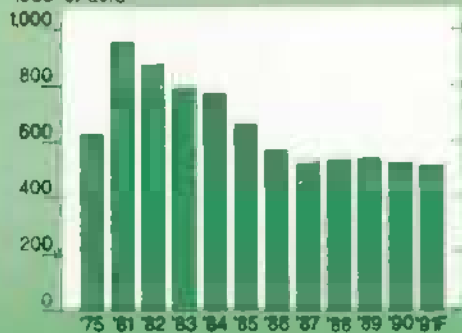
Real cash income⁶

\$ billion



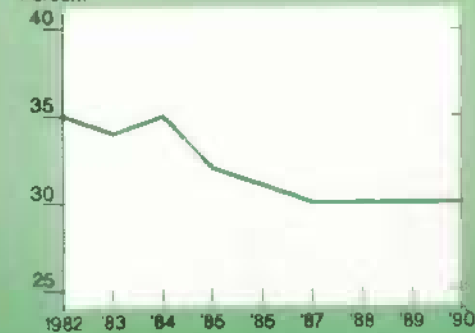
Average real value of farm real estate

1982 \$/acre



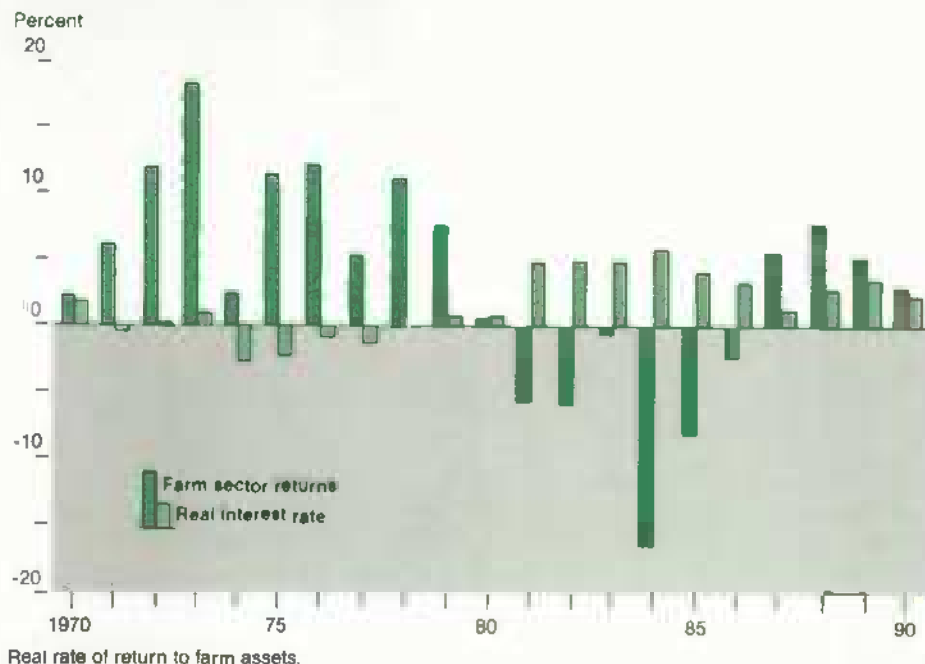
Farm value/retail food costs

Percent



¹For all farm products. ²Calendar quarters. Future quarters are forecasts for livestock, corn, and cash receipts. ³Retail weight. ⁴Seasonally adjusted annual rate. ⁵I=Dec.-Feb. II=Mar.-May. III=June-Aug. IV=Sept.-Nov. ⁶Cash expenses plus net cash income equals gross cash income. F=forecast.

Agricultural Economy



However, this situation abruptly changed in 1981. During 1981-86, overall real rates of return in the farm sector were negative due to large capital losses, while real interest rates averaged 4.1 percent, significantly higher than the historical average of less than 2 percent.

If real interest rates remained high, one would expect a continued softness of demand for assets like farmland, where a significant part of the total return is from capital gains. From 1981 to 1985, investors could achieve rates of return 4-6 percent above the rate of inflation by purchasing U.S. treasury bills, which carry very little risk.

But from 1987 to 1990, real interest rates ranged between 1.2 and 3.6 percent and were below real rates of return in the farm sector. Between 1987 and 1989, rates of return in the farm sector ranged from 5 to 8 percent, including capital gains and losses. Thus, farm investments again became somewhat more attractive. [Ken Erickson and Chris McGath (202) 219-0804] AO

Livestock, Dairy & Poultry Overview

Despite large inventories of cattle on feed, first-quarter 1991 cattle slaughter was the lowest in 10 years. Larger inventories of cattle on feed point to expanded cattle slaughter this spring through the fourth quarter.

Farmers' inventories of breeding hogs signaled a long awaited, but very modest, upturn on March 1. Market hog numbers were also up, pointing to slightly larger production and lower prices in 1991 than previously forecast.

The recession and continued high retail prices have limited commercial use of dairy products, resulting in large government purchases during first-quarter 1991. Commercial use is expected to increase later this year as the economy expands and retail milk prices fall.

Farmers Have More Cash To Purchase Equipment

Item	1960-1964	1965-1969	1970-1971	1972-1974	1975-1979	1980-1986	1987-1990
\$ billion (1982)							
Gross cash income (including net CCC loans)	119.5	129.9	128.8	165.7	157.8	148.2	140.0
Cash flow before interest payments	50.8	55.8	46.9	75.1	62.8	52.2	49.6
Less interest paid	4.7	6.6	7.6	9.0	12.6	18.4	11.5
Equals cash flow after interest payments	46.1	49.2	39.3	66.1	50.2	33.8	38.1

Data are annual averages for the periods shown.

1980's reduced capital expenditures. The resulting rise in the average age of the farm sector's machinery and equipment will be a stimulus to capital expenditures in 1991-92. (See the Resource article on farm equipment purchases.)

Overall, the farm sector will likely use more credit in nominal terms in 1991 than a year earlier, although total real farm debt outstanding may decrease slightly.

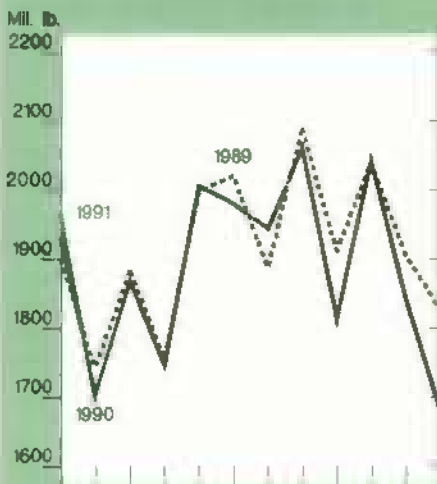
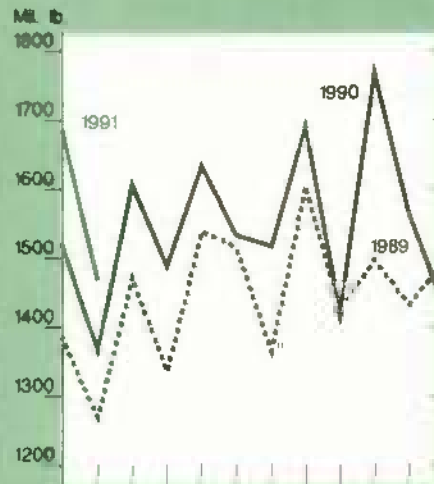
Returns to Farm Assets Are More Attractive

A comparison of the real rate of return on farm assets with the real rate of return on U.S. Treasury bills indicates the relative attractiveness of farm and nonfarm investments. From 1970 to 1979, real rates of return in the farm sector were generally high, while real interest rates were low or negative.

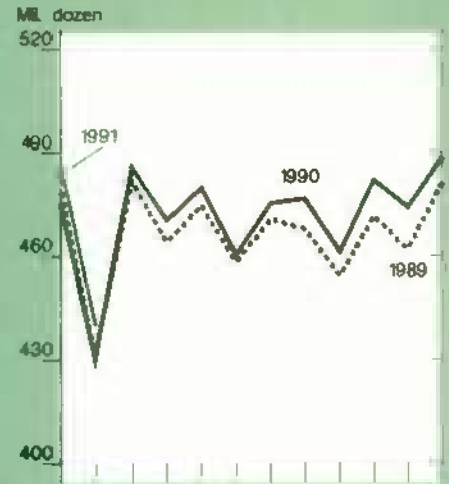
Livestock and Product Output

Agricultural Economy

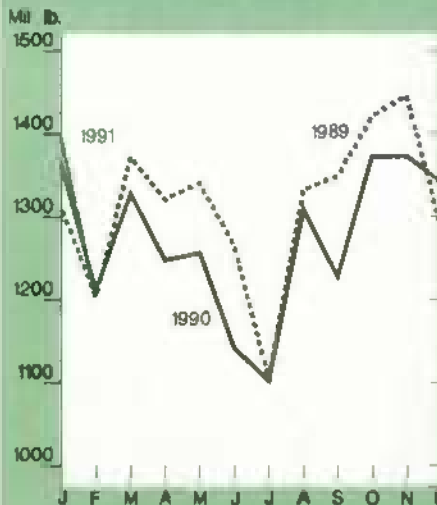
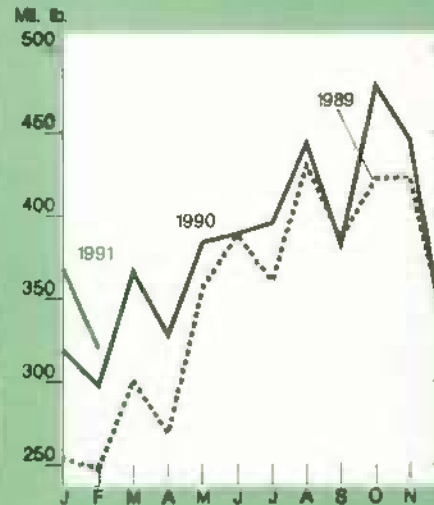
Commercial beef

Broilers¹

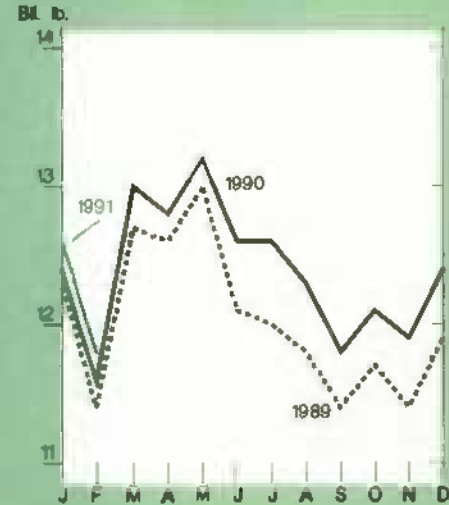
Eggs



Commercial pork

Turkeys¹

Milk



¹Federally inspected production, ready-to-cook

Cattle Slaughter Likely To Increase

Cattle on feed in the seven monthly reporting states on March 1 were 8 percent above a year ago, with February's placements up 6 percent and marketings down 1 percent. The expanded cattle on feed inventory is expected to support greater cattle slaughter this spring through second-half 1991.

Cattle on feed in the 13 quarterly reporting states were up 10 percent from a year earlier in October and January. Consequently, slaughter rates had been expected to rise this winter.

However, slaughter slipped below a year earlier during February and March, pushing first-quarter cattle slaughter about 3 percent below a year earlier. This was the smallest quarterly cattle slaughter in over 10 years, despite the large number of cattle on feed.

Due to increasing dressed weights, commercial beef production was less affected by reduced slaughter. Average commercial dressed weights during February were 686 pounds, up nearly 5 pounds from a year earlier and 35 pounds above 5 years ago.

Cow slaughter was down about 3 percent in the first quarter from a year earlier,

with dairy cow slaughter up 3 percent and beef cow slaughter down 9 percent. Thus, the increased dressed weights were largely due to a larger proportion of fed cattle in the slaughter mix.

Choice slaughter steer prices were in the low \$80's per cwt in late February through mid-April as slaughter remained below industry expectations. Cattle marketings through feedlots appeared to remain current even though average commercial dressed weights were record heavy.

Packers continue to have difficulties finding adequate numbers of cattle that will grade Choice. Several major packers

Agricultural Economy

reduced plant kill schedules during March.

Calf Slaughter Continues To Decline

Calf slaughter continues to decline as more of the male dairy-type calves move into feedlots rather than veal slaughter. The sharp decrease is mostly due to high prices for stocker and feeder cattle. Calf slaughter likely will continue to decline as long as stocker and feeder cattle prices remain high.

Calf slaughter during February was down 15 percent from a year ago, but veal production was up 11 percent. The unusual year-over-year expansion was due to an increase of over 50 pounds per head in dressed veal calf weights in February as formula fed veal represents an expanding share of veal slaughter. Veal calf weights have been above a year earlier since May 1990.

Hog Farmers Are Cautiously Expanding

Producers have responded to 17 straight months of profit by expanding their breeding herds 1 percent from a year ago. The last expansion occurred in March 1989. Long overdue and modest by historical standards, the expansion lifted the March 1 U.S. inventory of all hogs and pigs 2 percent from a year ago. The market hog inventory was up 3 percent, slightly larger than expected.

Slaughter increases brought about by this expansion should produce a more normal seasonal price pattern than last year. The seven market barrow and gilt price is expected to average \$51-\$57 per cwt in the second quarter, down from \$59 a year earlier. Prices are expected to rise seasonally this summer, then decline and average \$50 per cwt in the fall.

Several factors explain producers' delay in expanding breeding herds, including a hesitancy to build or expand facilities. Recent financial data suggest that producers have been paying off debts rather than increasing capital expenditures.

States with at least a 5-percent year-to-year increase in their breeding herd inventory include Illinois, Indiana, Kansas, Missouri, and North Carolina. States with at least a 5-percent decrease include Kentucky, Michigan, Ohio, Pennsylvania, and Tennessee.

The breeding herd also declined in Iowa. Because Iowa has about one-quarter of the nation's hogs, developments there have a large impact on total U.S. inventories, which in turn helps explain the nation's current slow expansion.

Broiler Prices To Be Lower in 1991

Second- and third-quarter broiler prices, at 49-55 cents and 53-59 cents a pound, likely will average below a year ago, reflecting abundant broiler supplies and exports below the year-earlier record. First-quarter wholesale broiler prices averaged 51 cents a pound, 5 cents below a year ago, reflecting a production increase of about 6 percent and a 4- to 5-percent drop in exports. Spring and summer cookout and fast food use are expected to help keep wholesale broiler prices above production costs.

Both second- and third-quarter production are expected to be about 6 percent above a year ago. Production increases are slowing in the second quarter in response to lower prices and lower net returns that carried over from late 1990 into the first quarter of 1991. Producer net returns averaged 6 cents a pound in the first quarter, 4-5 cents below a year ago.

Retail broiler prices in 1991 probably will average in the high 80's, slightly lower than a year earlier. First-quarter retail prices averaged 89 cents a pound, compared with 90 cents in 1990. Second-quarter prices likely will average around 87 cents, 3-4 cents below a year ago.

Turkey Prices To Rise

Turkey prices are expected to rise seasonally during the second quarter, given moderate production increases. Eastern

region hens will average 56-62 cents a pound, compared with 61 cents in second-quarter 1990.

Wholesale hen and tom turkey prices moved up in March, supported in part by high beef and pork prices, and averaged slightly above a year ago. Some turkey parts prices were strong. Drumsticks, in particular, had record first-quarter prices, due to gains in ground turkey sales and brisk exports of turkey parts. Hen prices in the Eastern region reached 59 cents per pound in March, but averaged 56 cents in the first quarter, slightly below a year ago.

Turkey stocks, high since late last year, were 343 million pounds on March 1, 24 percent above a year ago and a record for March. However, in relation to growing use, stocks are considered reasonable.

Production growth is slowing, and a year-over-year production increase of 4-5 percent is estimated for the second quarter. Poultry placements in February were only 2 percent above a year earlier. Thus, the stock buildup is likely to moderate later this year.

Egg Prices To Weaken

Second-quarter table-egg production is expected to increase 1 percent from a year earlier, following a 1.6-percent increase in the first quarter. Third-quarter production is expected to increase fractionally. No large increases in flock size are anticipated, but production gains will likely put downward pressure on prices.

While total egg production is forecast to increase about 1 percent in 1991, most of the increase is expected to be in hatching eggs, which will likely rise 4 percent from a year earlier. Table-egg output is expected to increase only fractionally.

The table-egg flock size on March 1, around 230 million hens, was fractionally smaller than a year earlier and about the same as in February. The total flock size, at 273 million hens, was about 1 percent above a year earlier, reflecting a 13-percent smaller egg-type hatching

flock and a 7-percent larger broiler-type hatching flock.

Wholesale egg prices probably will weaken as additional production is marketed. New York wholesale prices for Grade A large eggs are expected to average 74-79 cents per dozen in 1991, down from the record 82 cents of the past 2 years. Second-quarter wholesale prices are forecast to average 69-75 cents per dozen, compared with 75 cents a year earlier.

Retail prices likely will average in the low 90's in 1991, several cents below the near record \$1.01 a year earlier. Second-quarter retail prices are expected to average 92 cents, reflecting the decline in wholesale prices.

Dairy Surplus Grows

Weak commercial use, large stocks, and continued growth in milk production resulted in large government purchases during first-quarter 1991. Removals were equivalent to 4.8 billion pounds of milk on a milkfat basis, up from 3.9 billion a year ago.

On a skim solids basis, government purchases totaled 2.1 billion pounds. Purchases were near zero a year earlier, when market prices generally were well above support prices.

Commercial use of dairy products has been constrained by the recession and continued high retail prices. Preliminary

indicators showed no increase from a year earlier during January-March. Meanwhile, large unreported user stocks of nonfat dry milk likely continue to cut demand for recently made nonfat dry milk.

Sharp drops in milk prices have slowed growth in milk production, but the increase of 2 percent during January-March provided more milk than stagnant commercial markets could absorb. Most of this extra milk went into producing butter and nonfat dry milk for sale to the government.

The pace of government purchases is expected to slacken later this year. Increases in milk production probably will slow. Meanwhile, economic recovery and falling retail dairy prices are projected to trigger sizable gains in commercial use later this year.

Government purchases in 1991 are projected to be similar to last year's 9 billion pounds, milk equivalent, milkfat basis. On a skim solids basis, 1991 purchases will rise sharply from last year's low level. This year's surplus of skim milk may be almost as large as the cream surplus.

For further information, contact: Ken Nelson, coordinator; John Ginzel, cattle; Richard Stillman, sheep; Felix Spinelli and Leland Southard, hogs; Lee Christensen, Agnes Perez, and Larry Witucki, poultry; Jim Miller and Sara Short, dairy. All are at (202) 219-1285. **AO**

Field Crops Overview

The Prospective Plantings report released on March 28 provides information on how farmers are reacting to new farm flexibility provisions and to changes in ARP levels. The report indicates that corn and sorghum plantings will be up in 1991, but oats area may slip to an alltime low. Soybean growers may plant the smallest area since 1976, and wheat area is also expected down.

The planting intentions estimates are based on voluntary responses from about 75,000 farmers and ranchers who were surveyed by USDA during March 1-15.

Feed Grain Plantings Up Slightly

Producers of feed grains (corn, sorghum, oats, and barley) intend to plant 105.5 million acres in 1991, about 2 percent above last year's actual plantings. Farmers intend to plant 76.1 million acres of corn, 2.6 percent more than last year, and about 5 percent above 1989. Growers are likely reacting to relatively steady prices and a lower Acreage Reduction Program (ARP) requirement.

Farmers in Corn Belt states indicate they will increase their corn area this year. Illinois and Indiana show the largest gains over last year's plantings.

Sorghum plantings are intended to be 11.1 million acres in 1991, up about 6 percent from last year's actual plantings. Barley producers reported intentions to plant 8.7 million acres of barley, 6 percent above area planted last year.

Farmers reported intentions to plant 9.5 million acres to oats, 900,000 less than last year. Less area is intended for harvest as grain. The reduced ARP requirements for corn, sorghum, and barley this year are likely to also reduce oat plantings as a cover crop on Acreage Conservation Reserve acreage.



Agricultural Economy

Plantings differ from intentions because of weather and economic factors. For example, plantings of the four feed grains totaled 103.3 million acres in 1990, 2.8 million less than reported intentions of 106.1 million acres. The intentions report is taken in early March, which precedes the sign-up period. (Sign-up for all program crops was March 4-April 26.)

This year, farmers may change their planting intentions because they have more time to study and understand some of the complex changes included in this year's program.

While spring planting is beginning in the Northern Hemisphere, farmers in the Southern Hemisphere are just completing their 1990/91 harvests. Argentina is harvesting its largest corn crop in 3 years, the result of excellent growing conditions that have led to high yields. Production is forecast at 7.5 million tons in 1990/91, 44 percent above a year ago, and exports are expected to increase nearly 40 percent to 4.1 million tons. Similarly, Argentina's sorghum output and exports are forecast up 25 percent and 17 percent.

South Africa is expected to reap its lowest corn crop in 3 years, forecast at 7 million tons. This is a 21-percent drop from

1989/90. And exports will only reach 400,000 tons, compared with 2.9 million a year earlier.

Wheat Plantings Down in Major States

Intended wheat seedings for the 1991 crop are pegged at 69.0 million acres, far below 77.3 million acres a year earlier and 76.6 million in 1989. Declines are expected in all major wheat-producing states except Washington. The larger plantings in Washington are inflated by the planting of spring wheat on land that was planted to winter wheat last fall, but suffered winterkill.

The decline in wheat area stems from a higher wheat ARP and this year's low wheat prices. Average 1990/91 prices are about \$1 per bushel below 1988/89 and 1989/90.

Winter wheat seedings are estimated at 51.0 million acres, down 10 percent from 1990. Durum plantings are expected to be down 8 percent from last year, at 3.3 million acres, and planting intentions show other spring wheat off 12 percent.

The record 1990 world wheat crop of 590 million tons is contributing to a forecast 4-percent decline in 1990/91 world trade. Competition among the major exporters is strong. To increase exports, the EC and the U.S. increased their export subsidies for wheat during the first 7 months of the marketing year (July/June).

However, by March, the pace of U.S. and EC export sales had slackened. Because of budget pressures, EC restitutions fell nearly \$20 per ton from the January average and U.S. sales under the Export Enhancement Program (EEP) slowed to a trickle as the \$425 million EEP funding cap for the current fiscal year was approached. However, in April, a supplementary spending bill was signed that removed the cap on EEP funds.

U.S. wheat exports in 1990/91 are forecast at 29 million tons, 16 percent below 1989/90. EC exports also are forecast

U.S. Corn Exports Weaken, Stocks Grow

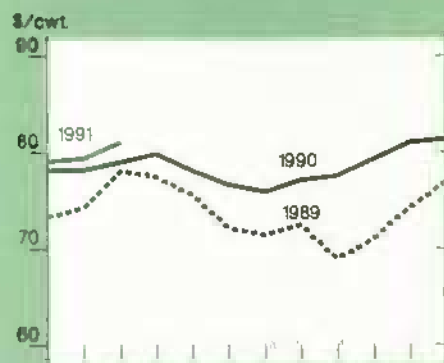
	1988/89	1989/90	1990/91
<i>Million metric tons</i>			
WORLD			
Wheat			
Production	500	537	590
Use	532	535	565
Exports	97	97	93
Ending stocks	117	119	144
Corn			
Production	402	461	472
Use	460	479	473
Exports	64	73	59
Ending stocks	89	71	71
Soybeans			
Production	96	107	105
Use	98	104	104
Exports	23	27	25
Ending stocks	18	20	22
UNITED STATES			
Wheat			
Production	49	55	75
Use	27	27	37
Exports	39	34	29
Ending stocks	19	15	24
Corn			
Production	125	191	202
Use	133	146	157
Exports	52	60	44
Ending stocks	49	34	35
Soybeans			
Production	42	52	52
Use	31	34	34
Exports	14	17	15
Ending stocks	5	7	10

Note: Exports of wheat and corn do not include intra-EC trade shipments. Data for marketing years. The wheat year is July/June, and the soybean and corn marketing years are October/September.

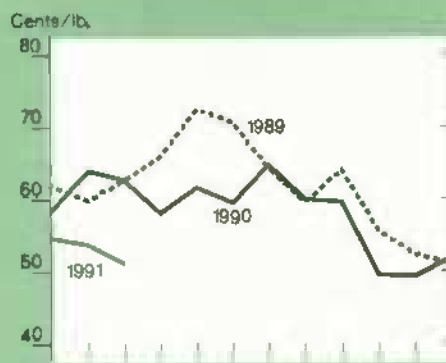
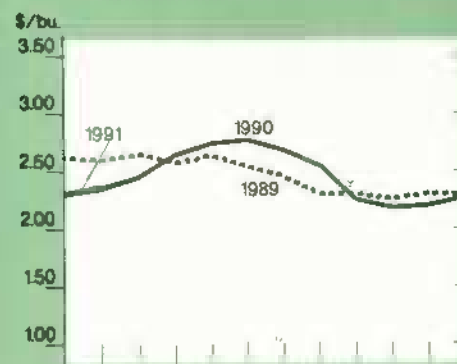
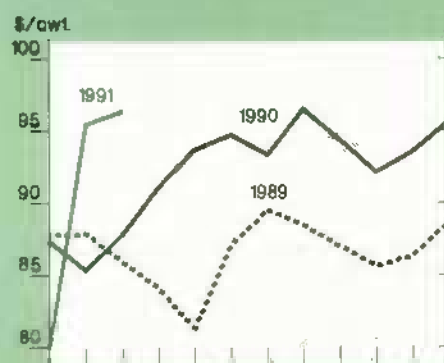
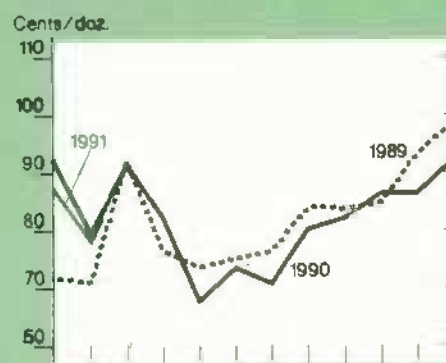
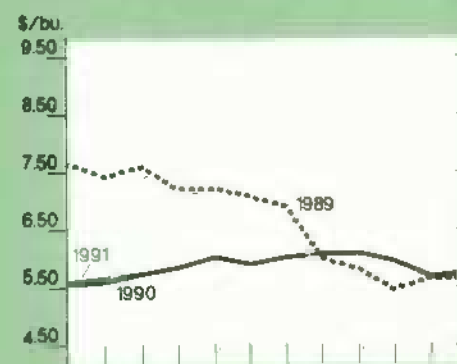
Commodity Market Prices

Agricultural Economy

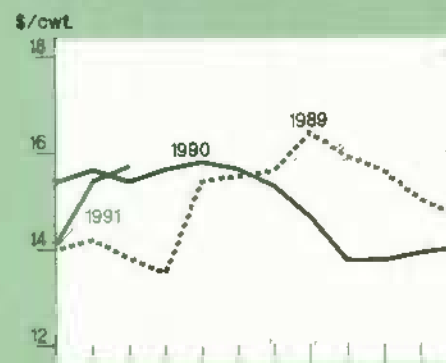
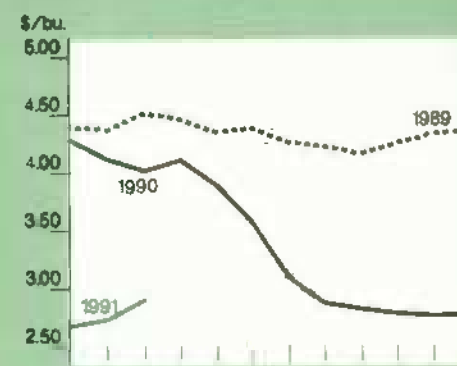
Choice steers, Nebraska



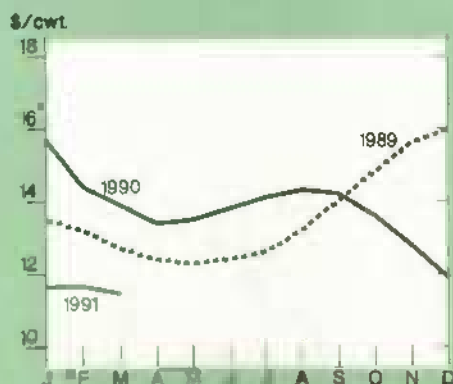
Broilers, 12-city average

Corn, Central Illinois¹Medium steers, Oklahoma City²Eggs, New York³Soybeans, Central Illinois⁴

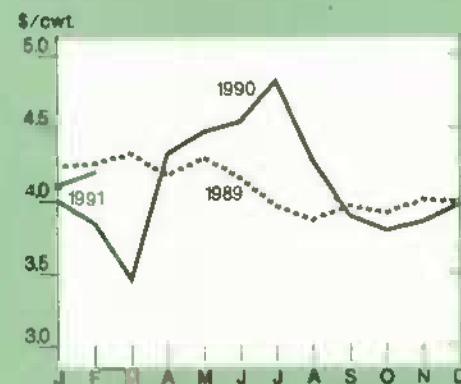
Barrows and gilts, 7 markets, Omaha

Milled rice, SW Louisiana⁵Wheat, Kansas City⁶

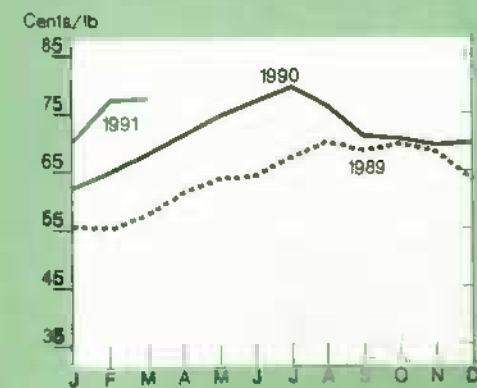
All milk



Sorghum, Kansas City



Cotton, average spot market

¹No. 2 yellow. ²600-700 lbs medium no. 2. ³Grade A large. ⁴No. 1 yellow. ⁵U.S. No. 2, long-grain.⁶No. 1 HRW.

Agricultural Economy

down, but Canada and Argentina are expected to increase exports.

Soybean Area Lowest Since 1976

Soybean growers intend to plant 57.1 million acres in 1991, the smallest area since 1976, and more than 1 percent below 1990's planted area. Substantial uncertainty surrounds soybean planting intentions because provisions in the 1990 farm act allow growers more flexibility to plant soybeans.

Among the major producing states, Minnesota, Indiana, and Ohio are likely to have larger planted area this year. Growers in Illinois—the leading producing state—indicate planted area of 9.1 million acres, down 100,000 from 1990, but still far more than any other state. Planting intentions in Iowa, the second-ranked state, are unchanged from last year at 8.0 million acres, and farmers in the Delta and Southeast are turning to other crops because of low soybean price prospects.

In 1990/91, global soybean production is forecast to decline 2 percent to 104.8 million tons. Brazilian production is expected to fall 3-4 million tons from 20.3 million in 1990, because of dry conditions in Rio Grande do Sul and Parana, two major soybean producing regions.

In contrast, the Argentine National Grain Board has forecast above-normal yields for soybeans and record yields for sunflowerseed. Argentine soybean production is projected at a record 11 million tons and sunflowerseed output at 3.6 million tons.

World soybean and meal exports in 1990/91 are forecast to fall to 25.2 million and 25.7 million tons. U.S. soybean exports have been revised down to 14.7 million tons as Western Europe has purchased record quantities from Brazil and Argentina. Both Brazil and Argentina have increased their raw soybean exports over meal shipments because of sharply reduced soybean meal sales to the Soviet Union. Compared with a year ago, U.S. soybean sales are most improved to Mexico.

U.S. soybean oil exports are forecast at 352,000 tons, the lowest since 1960/61. Exports are off because of suspended food aid and reduced export assistance to Pakistan, traditionally a large recipient of U.S. vegetable food aid and credit grants.

Cotton Area Up Substantially

Intended cotton plantings in 1991 are 14.0 million acres, up almost 13 percent from a year earlier, and about 32 percent above 1989. Upland area is higher due to the reduced ARP. Area sown to American-Pima cotton, which continues to decline, is likely to fall 4 percent to only 222,000 acres.

Indicated plantings in Arizona, California, and Oklahoma are down from last year. California planted acreage is off 14 percent as farmers continue to react to extremely dry conditions. Low temperatures have delayed planting in Arizona. Most other states indicate planting expansion.

While world cotton production is forecast up 9 percent to 87 million bales, use remains strong. Ending stocks remain tight and stocks-to-use ratios at the end of the season are expected to be quite low. Export prices remain high. But, at 25 million bales, world trade is little changed from last year.

U.S. cotton exports are forecast up 3 percent to 7.9 million bales, with China accounting for much of the import increase. Shipments from important cotton exporters, including China and Pakistan, are forecast low for the second consecutive year as domestic use is absorbing larger shares of their production. Soviet exports also are off substantially, reflecting internal marketing problems.

California Rice Area Down Significantly

Rice planting intentions for 1991 are 2.81 million acres, down 3 percent from a year earlier, but 3 percent above 1989. California rice farmers indicated they would plant 23 percent less acreage to

rice because of uncertain water supplies. Even though the rice ARP is down, some acreage will be switched to other crops under the planting flexibility provisions. Prospective acreage is down for long, medium, and short grain rice.

World rice production is estimated to reach a record 349 million tons (milled basis) in 1990/91. Trade in calendar 1991 is expected to increase slightly to 12.4 million tons. Strong Latin American imports, prompted by adverse weather, are supporting world trade despite record crops in Asia.

U.S. rice exports in calendar 1991 are forecast at 2.4 million tons, basically unchanged from a year earlier. Strong imports by Brazil are expected to offset some of the decline in exports to Iraq. [Jim Cole (202) 219-0840 and Sara Schwartz (202) 219-0825]

For further information, contact: Sara Schwartz, world food grains; Edward Allen, domestic wheat; Janet Livezey, domestic rice; Pete Riley, world feed grains; Larry Van Meir and Jim Cole, domestic feed grains; Tom Bickerton, world oilseeds; Roger Hoskin, domestic oilseeds; Carolyn Whitton, world cotton; Scott Sanford, domestic cotton; Jim Schaub, domestic peanuts. World information (212) 219-0820; domestic (202) 219-0840. **AO**



Specialty Crops Overview

Farmers have indicated they plan to cut edible dry bean and sweetpotato acreage in 1991 by 14 and 10 percent. Lower prices are a major reason. On the other hand, sugarbeet producers say their total intended plantings are unchanged from last year, although acreage probably will be lower in California.

The wholesale value of floriculture crop production rose 10 percent in 1990, continuing the previous year's growth. Wholesale values increased for all major groups.

U.S. aquaculture is forecast to continue its expansion in 1991, with most of the growth occurring in the catfish industry. The domestic farm-raised salmon industry also is expected to grow, despite increasing world production and rising U.S. imports.

Planting Intentions Vary

As of early March, farmers indicated they plan to cut dry edible bean acreage 14 percent in 1991. Pinto bean production in 1990 was 43 percent above a year earlier, and prices are averaging about one-half those a year ago. Navy bean prices this spring also are lower than a year earlier due to a large 1990 crop.

The biggest cuts are expected in North Dakota, where intended plantings of dry beans are 70,000 acres, 12 percent less than in 1990. Michigan, Nebraska, and Idaho growers indicated plans to reduce plantings by 40,000 acres in each state, representing declines of 11, 15, and 22 percent.

In Colorado, where pinto beans accounted for 88 percent of 1990 bean plantings, intentions are 35,000 acres below a year earlier. North Dakota, Nebraska, and Idaho also are major pinto bean producing states. Michigan and

North Dakota are the major Navy bean producing states.

Growers in California indicated plans to reduce dry bean acreage by 20 percent. California is an important supplier of several types of specialty dry beans. Scarce irrigation water due to the long-term drought probably contributed to the planned cuts.

Sweetpotato growers indicated plans for a 10-percent decrease from 1990 planted acreage. Production in 1990 was 15 percent higher than a year earlier and as a result, grower prices thus far in the 1990/91 marketing season have been lower than a year earlier.

The largest declines likely will occur in North Carolina and Louisiana, where intentions are 11 and 14 percent below 1990 acreage. These states are the two largest sweetpotato producers, accounting for 64 percent of 1990 U.S. production.

Sugarbeet growers indicated essentially unchanged total planted area in 1991. However, acreage is likely to be down 13 percent in California, according to farmers' spring intentions, while unchanged or up in most other states. (See Commodity Spotlight on California's sugarbeet industry.)

In contrast to California, most other sugarbeet areas saw rising production during the 1980's. Adoption of new growing and processing technologies has increased production efficiency in the beet sugar industry. In addition, the U.S. sugar program helps stabilize grower prices and maintains domestic sugar prices above world levels.

Tobacco farmers indicated they plan to plant an additional 26,000 acres in 1991 due to a larger burley quota. Most of the increase is expected in the major burley states of Tennessee and Kentucky. Planting intentions for flue-cured tobacco are down, with reductions planned for North Carolina and Georgia, two of the major producing states. The decline is anticipated because of a 5-percent drop in the effective flue-cured quota.

Floriculture Sales Rise 10 Percent

The wholesale value of floriculture crop production rose 10 percent in 1990, continuing 1989's growth. The equivalent wholesale value for the 28 floriculture crops covered in USDA's 28-state survey totaled \$2.77 billion in 1990.

Sales increased for all major groups. Bedding and garden plant sales rose 8 percent from 1989 to \$971 million, reflecting continued strong interest in home gardening. Potted flowering plants experienced the biggest gain in sales, jumping 25 percent to \$673 million. The increase reflects overall growth in consumer demand for floricultural products, particularly those for holiday use and indoor and outdoor landscaping.

Grower receipts from cut flowers increased 4 percent. Receipts for standard and pompon chrysanthemums were down 30 and 4 percent, offsetting gains received from miniature carnations, roses, and other cut flowers. The decline in domestic chrysanthemum sales is due partly to imports, which rose 16 percent for standards and 23 percent for pompons in 1990.

Growers indicated they plan to scale back production area of carnations, chrysanthemums, and roses in 1991. These three groups incur more competition from imports than other cut flowers.

The import value of cut flowers increased 3 percent in 1990, following an 11-percent gain the year before. But unlike 1989, when the quantity imported fell 2 percent, the volume of imports rose 22 percent in 1990 to 3.4 billion stems.

The larger volume came from Central and South American countries. Imports from Europe, the Middle East, and the Far East were curtailed during the latter half of 1990, reportedly because of a shortage of air freight during the Persian Gulf War.

Current restrictions on imports of potted plants limit the amount of foreign competition in that area. Intended production

Agricultural Economy

area for potted flowering plants, potted foliage, foliage hanging baskets, bedding and garden plants, and cut-cultivated greens is up from 1990.

The greenhouse/nursery industry, of which floriculture products are a major part, has been one of the fastest growing agricultural sectors in recent years. Grower sales of floral and nursery crops accounted for 10 percent of all farm crop cash receipts in 1990. Grower cash receipts for greenhouse and nursery products are projected at \$7.8 billion in 1990, up 6 percent from 1989.

Aquaculture To Expand in '91

The U.S. aquaculture industry is forecast to continue its expansion in 1991. Catfish production is expected to account for most of the growth, but trout, salmon, mollusk, and shrimp production also are expected to increase.

Catfish production was 5 percent higher in 1990 than a year earlier, but the outlook is for a larger expansion in 1991. The February catfish survey indicates that pond area devoted to production grew 7 percent in 1990. This trend is expected to continue in 1991, as over 14,000 acres of ponds are being renovated or constructed.

At the beginning of 1991, inventories of small and medium food-size catfish were 39 and 27 percent larger than a year earlier. Inventories of stockers and fingerlings also were up—13 and 14 percent—indicating continued expansion in 1991 and into 1992. Stockers are longer than 6 inches but weigh less than three-fourths of a pound. Fingerlings are less than 6 inches long.

Higher production and prices boosted grower revenues from trout by 7 percent in 1990. Fingerlings sold were up 53 percent from a year earlier, indicating continued growth during 1991. Idaho is the largest trout producer.

Despite increasing world production of farmed salmon and rising U.S. imports, the domestic farm-raised salmon industry is expected to continue growing. The

demand for fresh salmon is strong, and prices have held up well, even with mounting imports.

Farm-raised alligator production is a small but fast-growing segment of the aquaculture industry. Most farm-raised alligators are grown in Louisiana and sold for their skins, although there is also a market for alligator meat. Skins accounted for about 70 percent of sales from farm-raised alligators in Louisiana between 1984 and 1989. Florida also produces farm-raised alligators. [Glenn Zepp (202) 219-883]

For further information, contact: Boyd Buxton, fruit; Gary Lucier, vegetables; Peter Buzzanell, sweeteners; Verner Grise, tobacco; Doyle Johnson, tree nuts and greenhouse/nursery; David Harvey, aquaculture; Lewrene Glaser, industrial crops. All are at (202) 219-0883. **AO**

U.S. Agricultural Trade Update

Get the latest comprehensive data and analysis every month with this timely newsletter from ERS. Six pages of new export, import, and balance-of-trade information on major commodities. In tables, narrative, and numerous charts. Rushed by first class mail to your personal attention.

Subscription is only \$15 a year. Multiyear discounts.

✓ To subscribe, call toll-free, 1-800-999-6779.

Or write —

ERS-NASS, P.O. Box 1608
Rockville, MD, 20849-1608.

Commodity Spotlight



Pork Price Spread Sets Record

In August 1990, the price spread between the farm and retail value of pork surpassed the record set in November 1987. The price spread continued to widen until it reached \$1.46 per pound in December, 29 cents above November 1987. The spread then narrowed by 6 cents in January 1991 and dropped 2 cents more in February.

The farm-to-retail price spread for pork grew more rapidly than inflation between November 1987 and December 1990. Had the price spread grown at the rate of inflation, it would have been only \$1.36.

Higher marketing costs account for some of the growth in the price spread between 1987 and 1990. Over time, price spreads tend to widen as inflation increases the costs of marketing, processing, and retailing. In addition, consumer demand for more trimming and improved packaging adds costs. Moreover, productivity growth in food retailing is too low to offset the effects of these higher marketing costs.

However, cost changes only explain some of the growth in the farm-to-retail price spread. There are some shortcomings in the marketing process. These include poor-quality and high-cost information, adjustment lags, potential flaws in the competitive structure of pork marketing and retailing, and other factors.

One symptom of these shortcomings is the shortrun instability in the price spread. Given the longrun trend toward higher marketing costs, one might expect price spreads to grow more or less steadily over time. But this clearly is not the case.

Instability is caused by the tendency for retail price changes to lag behind farm price changes. If there's no lag—meaning that increases in the farm price are immediately reflected in retail prices—the price spread would only rise with inflation and other costs. But with a lag in price transmission, the price spread is non-constant, and at times, quite variable.

Two reasons are cited by the industry to help explain the lag in price transmission. First, the delay in changes between farm and retail prices is often attributed to the time it takes products to move from farms to retail outlets, with the

prices of products currently in stores reflecting earlier farm prices. As a result, farm-to-retail price spreads frequently narrow when farm prices are increasing, and widen as farm prices decrease.

Second, consumers react negatively to frequent price changes (especially price increases), and stores consequently "smooth out" such changes. In the longrun, however, the marketing system cannot keep the retail price of pork constant and still balance production and consumption.

But basing current retail prices on past farm or wholesale prices is economically inefficient. Economists expect prices at different levels in a vertical market to simultaneously adjust to changes in market information. In an efficient market, current retail prices should reflect all current information on wholesale and farm prices and costs.

Price Increases Transmitted Faster

Recent research at Purdue University and USDA has shown that increases in the farm price of pork are passed on in retail

prices more rapidly than farm price decreases.

The USDA model of monthly farm-to-retail price transmission implies that farm price increases are passed on four times as rapidly as farm price decreases. Farm price increases for pork are fully reflected in retail prices after about 3 months, while retail prices have adjusted to only 50 percent of a farm price decrease after 3 months. A year is needed for retail prices to react fully to farm price decreases.

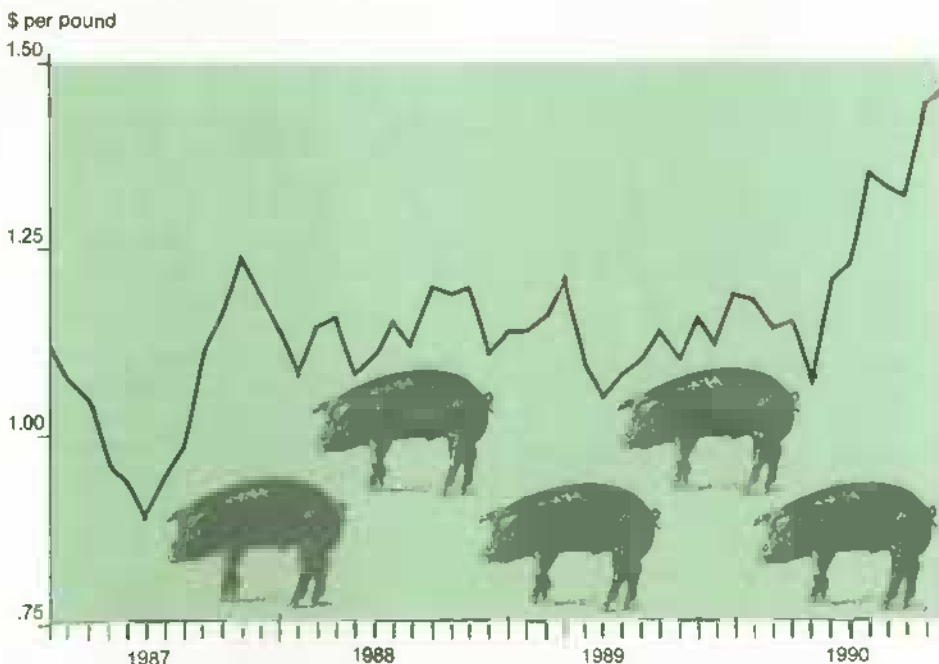
This evidence helps explain the situation in late 1990. Between October 1990 and January 1991, farm prices for pork fell steadily, while retail prices did not drop significantly until January. The delay in transmitting farm price changes to retail prices was a major factor in the record spreads of late 1990.

What influence does the delayed and asymmetric reaction of retail prices to farm price changes have on the profits of pork marketing firms? The farm-to-retail price spread reflects the costs and profits of marketing, and the volatility of this spread probably causes profits to fluctuate greatly. The wholesale-to-retail spread is particularly variable.

The slower reaction of retail prices to wholesale price decreases, compared with price increases, suggests that high spreads and high profits may persist longer than low spreads and low profits (or losses). However, in general, food retailing is a low profit business. Any extra profits made from marketing pork when its wholesale price is dropping are likely used to supplement losses made on other items.

In fact, food prices appear to be more responsive to costs than the prices of most goods. A recent survey found that the prices of many non-food items are adjusted yearly or even less frequently. [Bill Hahn (202) 219-0712] **AO**

Pork Farm-to-Retail Price Spreads Widen



Commodity Spotlight

California's Sugarbeet Industry Under Stress

California was the first state to commercially grow sugarbeets (in 1870), and it remains a major producer. But while acreage has been rising in most of the other 13 states that grow sugarbeets, California's acreage is declining due to disease, drought, and the existence of many profitable alternative crops.

The area planted to sugarbeets in California is projected to be 150,000 acres in 1991, down 13 percent from 1990, 30 percent from 1988, and 59 percent below the record of 1964. When two factories—one in California and one in Arizona—closed in 1982, acreage dropped sharply. (The Arizona factory received sugarbeets from California.)

Most of the State's remaining eight sugarbeet processing facilities will operate below capacity this year. To maintain volume and customer base, some factories are processing imported raw cane sugar.

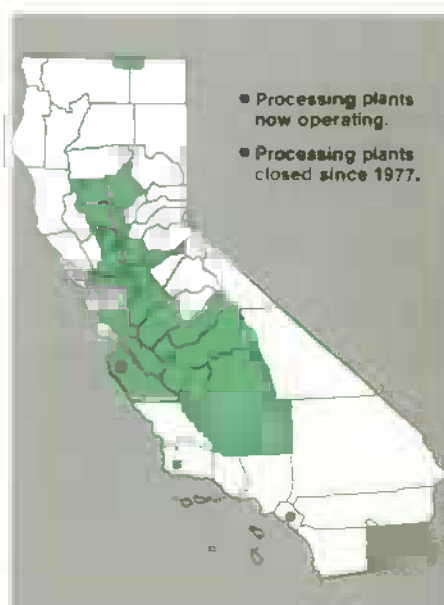
California has an abundance of sugarbeet diseases, some of which are exacerbated by the lack of a hard winter freeze that helps control pests. Currently, the most destructive disease is rhizomania, first detected in California in 1983. Rhizomania is a virus spread by a fungus that drastically reduces yields and can cause a total crop loss.

The best weapon for fighting rhizomania was a soil fumigant called Telone II, which was temporarily banned by the California Department of Food and Agriculture in April 1990 after trace amounts were detected in air samples. (Telone II is on a list of chemicals that may cause cancer.) It may be re-approved by late 1991, but in the meantime, there is no good substitute. California is the only state in which Telone II is presently unavailable.

In the late 1980's, USDA and the sugarbeet industry launched an extensive soil-testing program to help growers avoid infected fields. Of the roughly 1 million acres in California on which sugarbeets are normally grown in rotation with other crops, an estimated 100,000 are infected with rhizomania.

Development of a totally resistant variety may be the only long-range solution to the problem, but scientists say it will be several years before such a variety is available. However, seed companies have developed partially resistant varieties, which farmers are using.

Central California Produces Bulk of State's Sugarbeets



Another major disease is "beet yellows virus," which is transmitted by aphids. An Integrated Pest Management (IPM) system has been implemented by the California Beet Growers Association to control the disease. Each growing region is required to have a "beet-free period" between crops to break the cycle of the disease.

The program requires close cooperation among growers, and it can restrict the freedom of some farmers to plant when and where they want. Although the IPM program has been successful in most of California, the virus persists in some areas.

Another IPM program in Southern California's Imperial Valley is being used to combat Lettuce Infectious Yellows Virus (LIYV), which is transmitted by whiteflies and is also destructive to sugarbeets. This program works by keeping areas free of certain weeds or other crops, such as cotton and cantaloupe, that might harbor the whitefly during the season when sugarbeets are not grown. Equally important has been the development of genetically resistant seed.

Despite Recent Rains, Water Is Tight

All sugarbeets grown in California are irrigated. While recent rains have improved the water situation, California is experiencing a fifth year of drought.

The severity of water shortages varies across the State. In the Central Valley, which accounted for about three-fourths of California's sugarbeet acreage in 1990, surface irrigation water, which is controlled by state or federal government, will be severely limited in most growing areas.

Water is also in short supply in the coastal Salinas Valley because of reduced well water. Unlike surface water users, well water users have more control over timing and quantity because state and federal governments do not intervene in allocation.

But in the Imperial Valley, which had 21 percent of the State's sugarbeet acreage in 1990, water comes from the Colorado River and will be adequate.

Very few sugarbeet growers obtain water from the State Water Project, which as of early April had decided to eliminate agricultural water deliveries. However, many growers do get water from the federal water system, which as of early April had severely cut agricultural deliveries to the Central Valley Project to only 25 percent of normal for 1991.

The state has purchased water from growers for the upcoming season, but it is too early to know what impact this might have on sugarbeet acreage.

To help control disease, growers rotate sugarbeets with other crops, usually other field crops because of similar machinery requirements. In areas with reduced water supplies, farmers will pay close attention to those crops that provide the best return for a given amount of water.

In general, sugarbeets have neither the highest nor the lowest water requirements among California's field crops. Actual water needs, however, vary by season and location. Among the field crops most prevalent in California, sugarbeets provide a relatively good return per unit of water.

According to research conducted in California, a typical sugarbeet grower in the Central Valley in 1989 required about 900 gallons of water to produce a dollar's worth of sugarbeets (gross value). This compares with 2,600 gallons for alfalfa, roughly 900 gallons for cotton, and 600 gallons for processing tomatoes. A sugarbeet crop requires about 2.8 acre-feet of water, compared with 4.1 for alfalfa, 2.7 for cotton, and 2.4 for processing tomatoes.

Competition From Other Crops

Sugarbeet returns per acre are generally above those for other field crops, but below many vegetable crops. Because sugarbeets reduce soil compaction, they have additional value in some areas when rotated with other crops. They are adaptable to a wide variety of soil types and climatic conditions.

Also, growers find that sugarbeet prices vary less than the price of many other crops. Sugarbeet prices are tied to the domestic price of sugar, which is stabilized by the U.S. sugar program. Although some other field crops have higher risks, they may have potentially higher returns.

Due in part to the presence of many profitable alternative crops, California sugarbeet growers are more sensitive than other farmers to price fluctuations. Sugarbeet production costs (per acre or per ton) are higher in California than in most other states, due in large part to diseases and higher land values.

At current U.S. sugar prices, California sugarbeets are only marginally competitive with several alternative crops, whereas in many other states with fewer alternatives, sugarbeet returns are far superior.

Amid Contraction, Some Expansion

California's population is growing rapidly. In the 1990's, urbanization will continue to spill into agricultural areas. In Central California, urban encroachment is reducing agricultural acreage, especially in counties that are close to the San Francisco Bay area, such as Stanislaus, Solano, and San Joaquin. Yolo and Sacramento counties are similarly affected by the rapid urban growth of the state's capitol, Sacramento.

Agricultural land values in California, as in other parts of the country, declined from the early 1980's until about 1987, and have risen slowly since then. However, returns from alternative crops likely affect sugarbeet acreage more than urbanization or the value of land.

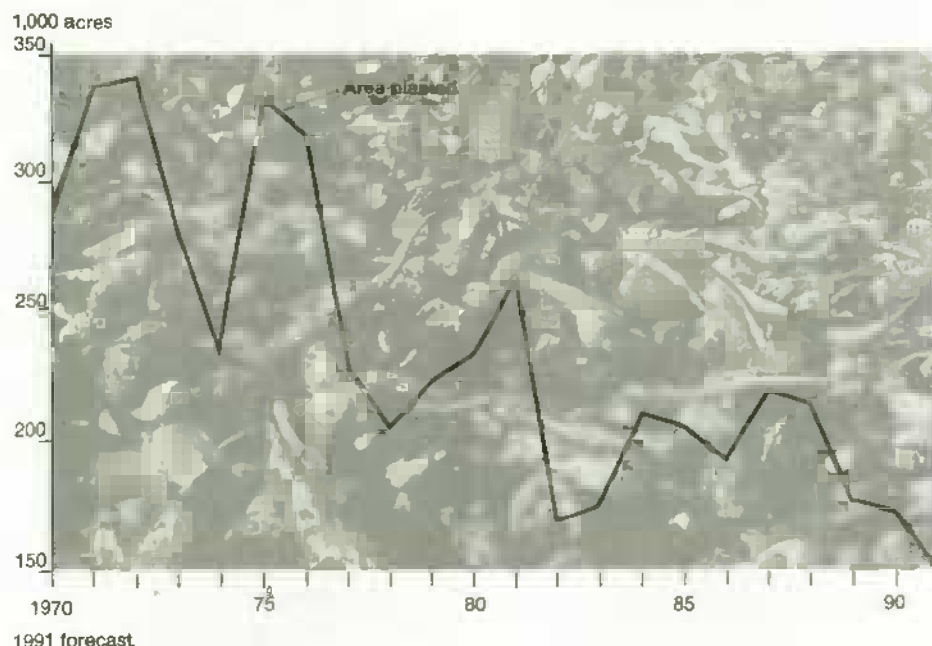
The December 1990 "Christmas" freeze damaged many sugarbeets. While it is too soon to gauge the total impact of the freeze on sugar production, estimates of damage range from 10,000 to 30,000 tons of sugar (raw value).

While overall acreage in California is down, expansion is occurring in some areas. For the first time, over 1,000 acres were planted last year in the Klamath Basin near the Oregon border in Siskiyou and Modoc counties. With good yields and sugar content and no major water problems in the area, growers have contracted for more than 5,000 acres this spring.

The major crop in the Klamath Basin is potatoes, which are planted and harvested at a different time than sugarbeets. As a result, many farmers hope sugarbeets will prove complementary and promote efficient use of some equipment.

The future of California sugarbeet acreage depends heavily upon progress in

California Sugarbeet Acreage Has Plummeted in the Past 20 Years



Commodity Spotlight

combatting disease and water problems. Acreage could continue falling if solutions are slow in coming.

On the other hand, if USDA and seed company researchers achieve technological breakthroughs, such as the development of varieties totally resistant to rhizomania, sugarbeet yields and economic returns could rise, and help reverse the recent downward trend in planted acreage. [Peter Buzzanell and Ron Lord (202) 219-0888] **AO**

May Releases from USDA's Agricultural Statistics Board

The following reports are issued at 3 p.m. Eastern time on the dates shown.

May

- 2 Egg Products
- Poultry Slaughter
- 3 Dairy Products
- Dairy Products—Annual
- 7 Celery
- 8 Vegetables
- 9 Crop Production
- 13 Milk—Prod., Disp., & Income
- 14 Farm Labor
- Potato Stocks
- 15 Milk Production
- Turkey Hatchery
- 17 Cattle on Feed
- 20 Catfish
- 21 Sugar Market Statistics
- 22 Cold Storage
- 23 Eggs, Chickens, & Turkeys
- 24 Livestock Slaughter
- Cold Storage
- 30 Peanut Stocks & Processing
- 31 Agricultural Prices

World Agriculture and Trade



Australian Sheep Industry Under Siege

The suspension of the Australian Reserve Price Scheme (RPS) for wool and a flock reduction scheme are causing Australian farmers to slaughter millions of sheep. Over the last year, Australia's wool prices have plummeted 50 percent.

Because Australia traditionally supplies 60 percent of the world's fine wool trade, its RPS served as a world floor price. The virtual doubling of the minimum reserve price between 1985 and 1989 led to an imbalance in world markets, a massive accumulation of Australian wool stocks, and a 13-percent increase in sheep inventories.

The suspension of the RPS will also affect major world wool markets. While exports from other major producing countries (New Zealand, Argentina, South Africa, and Uruguay) will remain high in 1991, returns to producers in these countries will be reduced substantially.

Price Supports For Wool Eliminated

The February 11, 1991, suspension of the RPS, which for 17 years guaranteed wool prices, will result in the slaughter of millions of Australian sheep. The Australian Wool Corporation, the statutory organization that administered the RPS, responded to plummeting wool prices by introducing a flock reduction scheme. The scheme calls for the Australian sheep flock to be reduced by 20 million head, or about 12 percent, in 12 months.

In addition, the sheep industry has been plagued by declining live sheep exports to the Middle East, due in part to Saudi Arabia's rejection of Australian shipments for health reasons and the United Nations' trade embargo against Iraq and Iraqi-occupied Kuwait. While trade recently resumed with Kuwait, trade with Saudi Arabia remains under a voluntary restraint until satisfactory health protocols are put in place.

Saudi Arabia traditionally has been Australia's largest market for live sheep, but Kuwait is also important. In 1989, Kuwait took 25 percent of Australia's live sheep exports, about 1.4 million head.

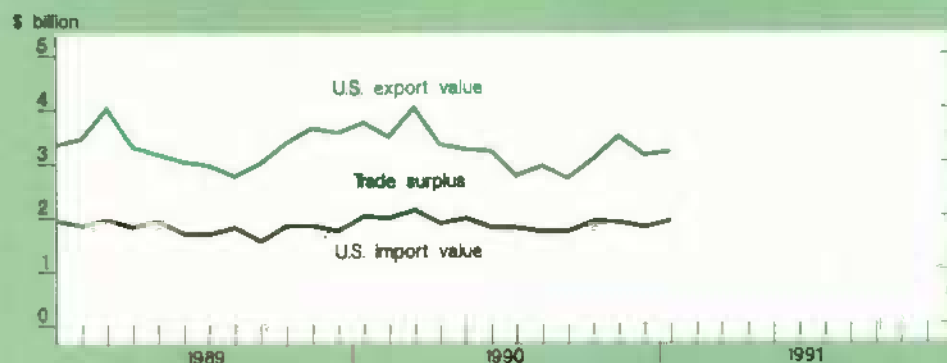
Under the flock reduction scheme, graziers receive \$Aus1.80 per sheep as an incentive to kill and dispose of their sheep on-farm or in community pits. They can alternatively choose to deliver their sheep for rendering. The scheme is financed from the Wool Board's Market Support Fund, which is funded by compulsory taxes on producers. To date, more than 840,000 of the 2.8 million sheep registered under the scheme have been certified killed.

Mutton prices dropped from \$Aus0.28 per kilogram in 1989/90 to \$Aus0.06 in 1990/91, and producers are unwilling to incur the transportation charges to move sheep from farms to processors. Consequently, 80 percent of the registered sheep slaughtered so far have been disposed of in on-farm or community pits. In the short term, meat processors and exporters are having difficulty obtaining the sheep they need to remain viable.

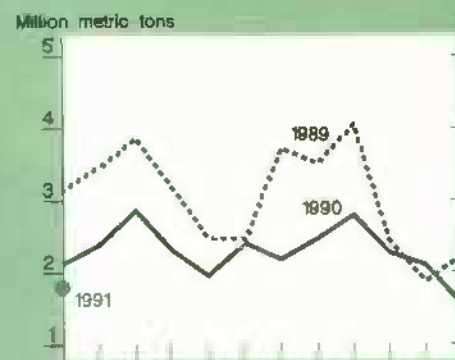
U.S. Trade Indicators

World Agriculture and Trade

U.S. agricultural trade balance



U.S. wheat exports



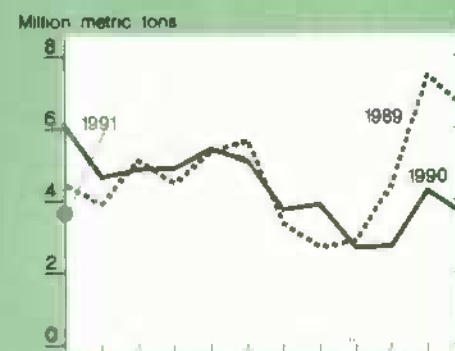
Export volume



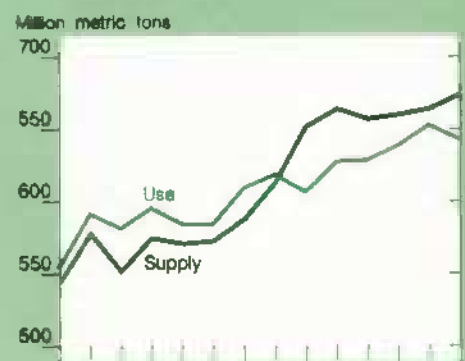
Index of export prices



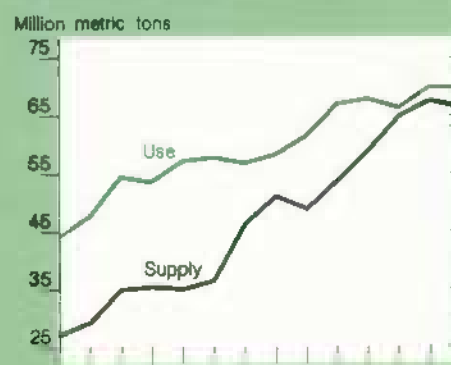
U.S. corn exports



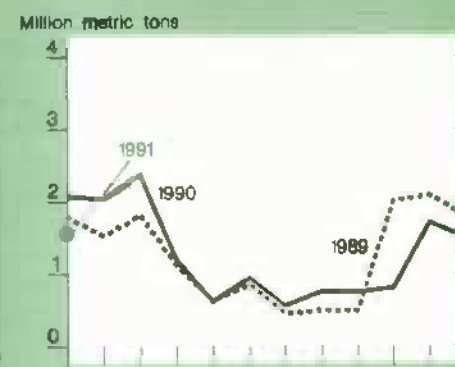
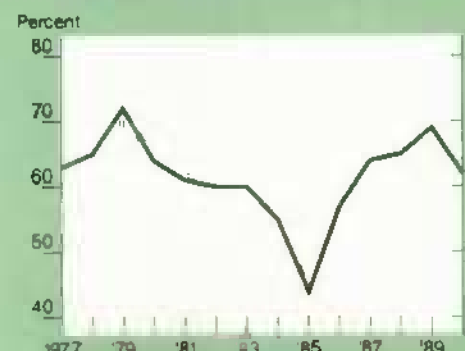
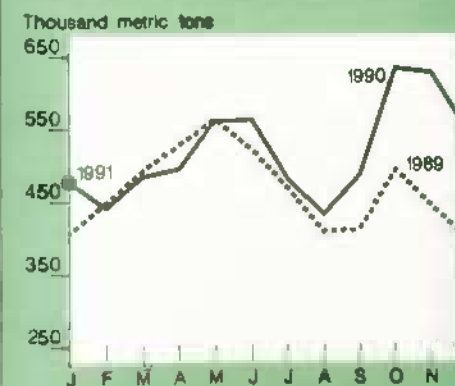
Foreign supply & use of coarse grains



Foreign supply & use of soybeans

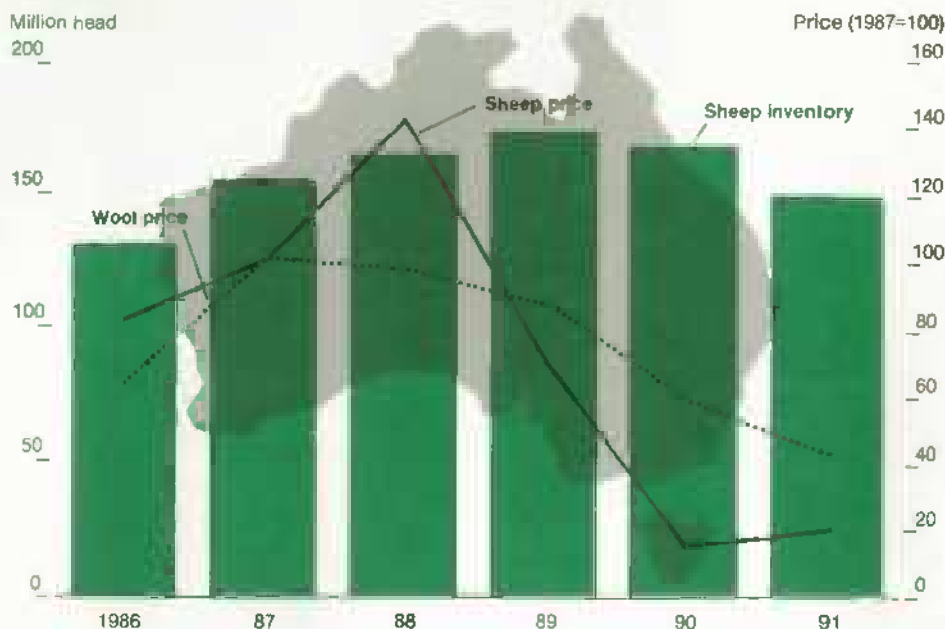


U.S. soybean exports

U.S. share of world coarse grains exports^{1,2}U.S. share of world soybean exports^{1,2}U.S. fruit & vegetable exports³¹Excluding intra-EC trade ²October-September years ³includes fruit juices

World Agriculture and Trade

Australian Sheep Herd To Be Reduced 12 Percent This Year



1990 and 1991 forecast

Australian Actions Rock Wool Market

Jolted by the Australian government's decision to suspend the floor price for wool, the New Zealand Wool Board announced on February 11 that it would suspend income support for farmers and its wool buying program. The Wool Board has cut its 1991-92 contribution to the International Wool Secretariat from \$NZ90 million to \$NZ50 million, and it will have to lay off employees.

The current crisis leaves the New Zealand Wool Board with few funds and relatively large stocks of lower-valued wool. Furthermore, the existence of the Board is being called into question, and the appropriateness of stabilization schemes to protect producers is also being examined.

In South Africa, plunging wool prices have sent producers in pursuit of government assistance. While the South African Wool Board decided to maintain its marketing arrangements, the drop in wool prices will prevent it from implementing the scheme unless supplementary financial aid is forthcoming. South Africa is one of the world's top ten wool producers.

Uncertainty Plagues U.S. Wool Industry

U.S. wool imports in 1990 were 71.7 million pounds, 56 percent of total consumption. Despite lower prices and the glut in the wool market, U.S. millers, who are already enduring a slow economy, are unwilling to take on additional inventory, fearing further price declines.

Domestic producers found generally lower prices when most of their wool came on the market in March and April. The overall impact of lower revenues on the U.S. sheep industry, however, will be mitigated by federal incentive payments that provide income support to producers.

Wool Prices To Remain Low

Australia's lower prices are likely to entice China and the Soviet Union, two major wool buyers, to step up purchases in coming months. If so, the forthcoming season could see markets healthier than anyone believed possible when the Australian floor price was operative and stocks were at an all-time high of 4.6 million bales. However, wool prices will remain depressed until the Australians

dispose of their stocks, which could take 5 years.

Thus, while Australian sheep producers have borne the immediate brunt of precipitously declining wool prices and the war in the Gulf, the flock reduction scheme and the elimination of the Australian RPS for wool should help correct the current imbalance in world supply and demand. Australia's situation illustrates how policies can distort world commodity markets and lead to unintended domestic consequences. [Nancy Morgan (202) 219-0610] **AO**

East European Reform Accelerates

Agricultural policy reform in Eastern Europe reached new heights in 1990 and early 1991. Governments no longer set production targets, letting farmers choose production based largely on market-determined prices. Administrative price policies also are disappearing rapidly.

Most East European countries view the shift toward market forces as their major reform. Important goals include the introduction of property rights, privatization of state-owned enterprises, establishment of currency convertibility, and more open foreign trade.

The East European countries all state that fully competitive markets are their aim. But reform is complicated by past distortions in the price structure, non-convertible currencies, domestic market structures, the domination of large, subsidized, state-owned enterprises, and a focus on the production of industrial goods. As a result, implementation of reform measures varies considerably among countries.

With time, reform will significantly affect agriculture. Production and consumption will be greatly altered by the removal of subsidies and changes in price policies. Substantial changes in

trade will likely be brought about by the decline and eventual demise of the Council for Mutual Economic Assistance, increased reliance on hard currency trade, and more open trade policies.

Reform Pressures Mounted in the 1980's

The 1980's brought increasing pressure for reforms. Agricultural production was satisfactory by international standards, but difficulties arose because of high production costs, limited food availability, and poor food quality.

Growth was achieved only by committing ever-larger resources, so that the marginal cost of producing more output was high. Many of the resources allocated to agriculture were overpriced, poorly conceived by planners, and not very productive. But nonfarm sectors also performed poorly.

Food availability in the 1980's reflects a paradox. Larger quantities of traditional, domestically produced agricultural products were made available, but they did not completely satisfy demand. Demand growth was fueled by rapid wage

increases, limited availability of alternative consumer products, and heavily subsidized food prices.

By international standards, consumption of meats, grains, and vegetables grew at a reasonable pace. But fruit consumption growth was low compared with the EC or U.S. Consumption growth masked the very limited variety and poor quality of food products. In contrast, EC and U.S. consumption is spread over a much wider selection of fruits and vegetables, many of which are imported.

East Europeans consume large quantities of domestically produced fruits and vegetables, with imports playing a small role in consumption. With more open borders, however, imports of tropical fruits, vegetables, and highly processed products likely will increase, provided that income is available to purchase them.

The quality issue embraces both raw and processed products. Historically, East European countries have invested heavily in food production, but very lightly in food processing and marketing. In contrast, the West has focused on processing and marketing. As a result, East European countries are at a significant disad-

vantage when it comes to exporting many higher-value processed items.

While Eastern Europe's agricultural output may grow, demand for traditional products is expected to stagnate or fall as incomes decline and retail prices rise. The effectiveness of reforms depends on each country's ability to introduce a market system. A major danger occurs if a country ends up with neither a market nor planned economy, as is occurring in the Soviet Union.

Policy Reform Progresses At a Fast Pace

Reform is proceeding at an unprecedented pace. Legislation in 1990 and 1991 is designed to transform centralized, state-run economies into decentralized, market-oriented economies. So far, each country is pursuing its unique path towards reform.

Faced with rising budget deficits and a need to liberalize foreign trade, all East European countries have introduced some type of price reform. These countries have either legislated price increases or liberalized price formation.

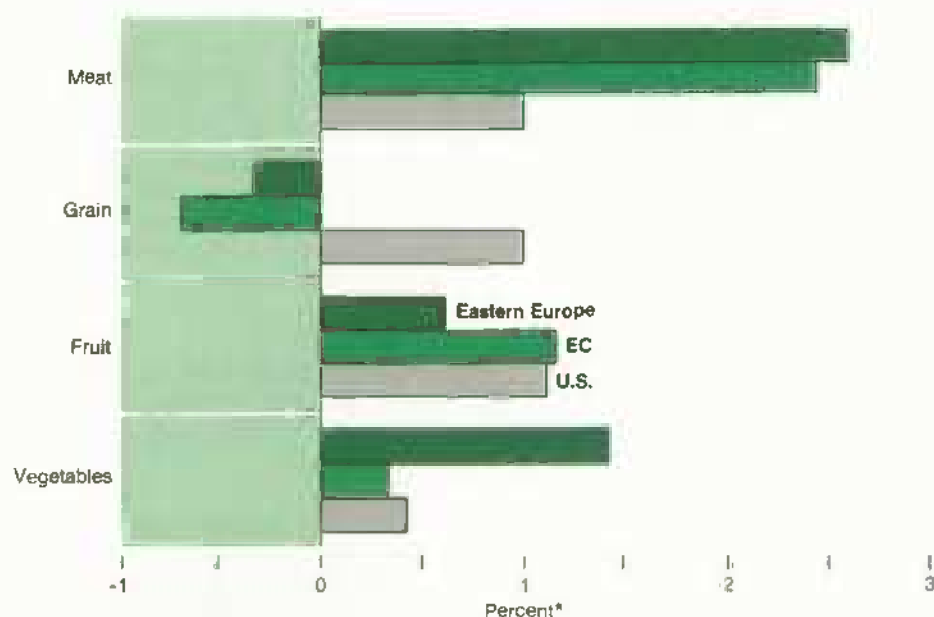
Legislated price increases are used to limit price rises, especially of some staple foods and public services. Price liberalization has as its goal a supply and demand mechanism for price determination. Some countries intend to at least partially compensate consumers for price increases through income supplements.

Poland Removes Controls

Poland took rapid steps to move from a planned to a market-based economy starting in mid-1989. Nearly all government price controls and subsidies were removed by 1990.

Food shortages disappeared shortly after price liberalization as higher retail prices and falling incomes reduced demand. While agricultural prices are free to move with market forces, a small stabilization fund was established for agricultural price support.

Eastern Europe Has Shown Strong Growth in Meat and Vegetable Consumption



*Average annual change in per capita consumption, 1980-89.

World Agriculture and Trade

In July 1990, Poland established the Ministry of Ownership Transformation to supervise privatization. The privatization process will include stock offerings, auctions, and direct sales. Workers will receive coupons that will permit them to buy up to 20 percent of their state enterprises at half price.

State farms will be treated just like any other state enterprise. Since 80 percent of Polish agricultural land is privately owned, tenure issues are not as great as in some other countries.

Internal convertibility of the zloty began in January 1990, with the exchange rate fixed against the dollar. (Internal convertibility means domestic enterprises have unrestricted access to foreign exchange for import and export transactions. However, the domestic currency is not tradeable outside the country.) Duty-free or low tariff rates apply to imports of most bulk farm commodities.

Since 1990, Poland's foreign trade is no longer centrally planned, and subsidies and quantitative restrictions no longer affect trade. Individuals are free to start trading companies to compete with former state monopolies. But export controls are used on some farm products to ensure adequate domestic supplies.

Hungary Frees Markets and Trade

In 1990, Hungary widened its reform from the production stage to the marketing and trading stages. The government freed virtually all producer prices in January 1990, although it retains authority to limit consumer price increases. Compensation schemes were initiated to help offset some of the impact of rising prices.

Hungary has two types of privatization programs, a self-initiated program, where a firm proposes privatization plans to the State Property Agency (SPA), and a state program, where the SPA tenders bids for groups of enterprises. The latter program started in September 1990. Actual sales from the first-phase of privatizations are expected to occur in mid-1991.

Using both programs, Hungary hopes to privatize more than 30 percent of its gross domestic product within 3 years. Hungary's privatization program does not provide for repatriation of land to former owners. Instead, the emphasis is on compensating former owners for lost assets.

Much of Hungary's agricultural land is already privately owned by individual cooperative members who are paid rent. If they desire, the members may withdraw land from cooperatives and operate it as a private farm.

Hungary's currency, the forint, was devalued 15 percent against western currencies in January 1991, the first devaluation since February 1990. No official plans to introduce convertibility have been announced.

With the state foreign trade monopoly abolished in November 1990, anyone can engage in foreign trade after registering with the Ministry of Trade. Trade restrictions were abolished on 85 percent of all products, but licenses are still needed to import foodstuffs. Likewise, export permits are required for some important foodstuffs. While Hungary's foreign trade sector is not completely open, most trade barriers have now come down.

Czechoslovakia Launches Price Liberalization

Between mid-1990 and early 1991, Czechoslovakia eliminated most subsidies and freed most prices. Following three rounds of administrative price increases in 1990, most prices were freed in January 1991, leaving only 12-15 percent of commodities with prices controlled in some fashion.

However, the price liberalization law allows the Czech government to set prices if necessary. Price ceilings are imposed on many agricultural products, including fodder grain, sugar, pork, poultry, and milk.

Czechoslovakia began publicly auctioning small establishments to private entrepreneurs in early 1991. However, the government is finding it difficult to deter-

mine the best way to sell large-scale assets that currently belong to the general public, but that may have ownership rights extending back to pre-communist times. A December 1990 law allows private ownership of farmland and permits the return of land confiscated in 1948 to its original owners or their descendants.

Czechoslovakia announced internal convertibility of the koruna, with some limitations, on January 1, 1991. The koruna was simultaneously devalued 15 percent.

In 1989, Czechoslovakia passed legislation allowing enterprises to directly engage in foreign trade. The former state trade monopolies were converted to diversified trading monopolies, and import quotas were lifted. Barriers are now mainly tariffs, surcharges, and licenses. Export restrictions were introduced for some livestock products, poultry meat, hops, and flour.

Bulgarian Producers May Be Withholding Commodities

Bulgaria freed prices of almost all goods and services on February 1, 1991, but constrained price increases on essential food items. Initial reports suggest that producers are holding commodities out of marketing channels in the expectation of higher prices—similar to Poland's experience in late 1989. Thus, the expected flood of products into markets has not yet occurred.

Bulgaria legalized limited private ownership of land in February 1991. The new law imposes limitations, including a maximum ownership of 20 hectares and significant restrictions on land sales. There are no limits on the use of leased land.

Owners of the land prior to its confiscation in 1946 are eligible for its return or compensation. Bulgaria has not announced a formal large-scale privatization program for state-owned assets. In January 1991, the government agreed to pursue small-scale privatization as part of an agreement with the International Monetary Fund.

Plans for convertibility of the lev have not been announced. The state monopoly on foreign trade was removed in 1989. Firms may engage directly in foreign trade, but all import and export transactions must be registered with the Ministry of Foreign Economic Relations. Licensing is required for most transactions.

Changes in Romania Lag Other East European Countries

Romania has not yet introduced a widespread market-determined price system. While farm prices in private markets are free, prices for many nonessential products were increased in November 1990. A more complete program of price liberalization, initially intended for January 1991, has been delayed.

In early 1991, the Romanian legislature debated a land law that would provide property rights to former landowners. Options included limiting claims to 100 hectares, requiring active farmers to

obtain and retain title to the land, and providing the state with first refusal rights on the resale of land.

Even without a land law, decrees in early 1990 allowed farm workers to cultivate private plots and increased private agriculture's share of production to nearly 30 percent from 8 percent in 1989. The method for privatizing state-owned enterprises was still being debated early this year, and the sale of enterprises is not scheduled to begin until July 1991. At least 50 percent of the country's capital stock is expected to be privatized within 3 years.

The Romanian lei was devalued 40 percent on November 1, 1990. And starting January 1, 1991, internal convertibility was to be introduced gradually through hard currency open auctions. In early 1990, monopoly trading rights for state trading organizations were removed, and small companies are now participating in foreign trade.

Looking Ahead...

Market-oriented reforms accelerated in early 1991. But even with the faster pace of reforms, the legal framework needed for well-functioning market economies could be years off. Many difficult issues are just now being tackled, especially privatization and ownership claims stemming from nationalization of property under the communists. [Bob Koopman and Mark Lundell (202) 219-0621] AO

U.S.-EC Trade Disputes Create Tension

Current U.S.-EC agricultural trade relations have captured the spotlight in the General Agreement on Tariffs and Trade (GATT) talks. But agricultural trade disputes are nothing new; they have erupted between the U.S. and the EC since the Common Agricultural Policy (CAP) was introduced in the 1960's.

The disputes take on added importance because of the continuing drop in U.S. agricultural exports to the EC. Traditionally the U.S.'s largest overseas market for farm products, the EC was replaced by Japan in 1989. Increased EC self-sufficiency and expanded U.S. sales to the Pacific Rim are responsible for this shift.

Grains, feeds, and oilseeds are the most important component of U.S. agricultural sales to the EC. Combined, they accounted for over half of the \$6.8 billion in U.S. agricultural exports to the EC in fiscal 1990. However, sales of these products dropped throughout the 1980's—exports of oilseeds and products are 61 percent lower than in fiscal 1982, and grains and feeds declined by half during the same period.

EC policies have encouraged domestic production, which has increasingly met internal demand, displacing U.S. exports. Since the introduction of the CAP, the EC has moved from a net importer to a net exporter of many grain and livestock products. The EC's policy of subsidizing exports of surplus commodities also has led to heightened competition with the U.S. in third markets.

Despite their failure to reach a compromise position in the GATT so far, the U.S. and the EC have managed to resolve a number of specific trade disputes bilaterally.



World Agriculture and Trade

"Enlargement" Dispute Affects U.S. and Spain

Spain adopted the CAP, including the system of variable levies on grains, when it joined the EC in 1986. In order to place variable levies on corn imports, Spain had to withdraw a tariff concession it had granted under the GATT. Under GATT rules, the U.S. was eligible for compensation for this loss.

Negotiations on the amount and type of compensation were contentious, but resulted in Spain's agreeing to import 2 million tons of corn and certain nongrain feeds, and 300,000 tons of sorghum annually between 1987 and 1990 from non-EC sources. During this period, Spain imported 6.9 million tons of corn, sorghum, and nongrain feeds, mostly from the U.S.

Negotiations to extend the agreement began in September 1989. The U.S. argued that the compensation should be continued, while the EC maintained that this and other import-access questions should be decided at the GATT talks. When the EC did not move on its refusal to extend the agreement, the U.S. announced its intention to impose substantial duties on a range of EC agricultural products.

However, because neither party wished to have the dispute hamper efforts to restart the GATT negotiations, the EC agreed to extend the agreement until December 31, 1991, and to review the agreement in June in order to reach a final understanding by the end of September.

Procymidone Case To Be Settled Soon

In March 1990, the U.S. Food and Drug Administration's (FDA) random testing of imported wines revealed traces of a fungicide, procymidone. Because no minimum tolerance level had been set, products containing traces of procymidone were not allowed to enter the

U.S. By September 1990, 38 French wines, 12 Italian wines, and 1 Spanish wine were subject to automatic detention.

Procymidone is widely used by European winegrowers, but its manufacturer had not registered it with the Environmental Protection Agency (EPA) for use in the U.S. In May 1990, the manufacturer filed a petition for approval with EPA, which establishes tolerance levels. However, the approval process can take over a year, and the affected wines could not be admitted in the meantime.

Wine accounts for one-fifth of the EC's \$4.4 billion in annual agricultural exports to the U.S., and France and Italy are the largest suppliers. Outside the EC, the U.S. is France's largest customer for wine and spirits. EC wine producers protested their lost exports, which they claimed could mount to \$200 million. The EC Committee for the Wine Industry and Trade asked the EC to enact retaliatory trade measures unless the U.S. agreed to a solution.

The procymidone issue was addressed in high-level discussions early this year. In February, EPA proposed an interim tolerance level for procymidone use that lasts for 4 years and applies to grapes grown prior to 1991. The FDA will alter its detention measures to reflect the final EPA ruling, which is expected before May 1991.

Oilseed Subsidy Case Unsettled

Several bilateral disputes with the EC have yet to be settled. In December 1989, a GATT disputes settlement panel determined that the EC's oilseeds subsidy regime discriminates against imported oilseeds and impairs the benefits of the zero-tariff binding granted to the U.S. in 1961. The EC accepted the panel ruling and stated that it would restructure the regime as part of a GATT agreement. The U.S. agreed not to retaliate under Section 301.


Since no GATT agreement has been reached, the EC has not brought its oilseeds regime into compliance with the ruling. Price proposals currently being negotiated by the EC Council would not change the regime's operation, although they would affect producer prices. The promised restructuring of the regime will not occur before the start of the 1991/1992 oilseeds marketing year.

EC Actions Threaten U.S. Meat Exports

The EC still bans imports of bovine meat from hormone-treated animals. The ban, which went into effect on January 1, 1989, affects U.S. exports of beef and veal, worth approximately \$35 million in fiscal 1988, and beef variety meats. The U.S. and the EC established a task force to resolve the dispute, but so far no plan has emerged that would allow the U.S. to resume beef and beef-product shipments to the EC at previous levels.

In fiscal 1988, before the hormone ban, U.S. sales of meat and meat products to the EC were valued at \$230.2 million. By 1990, this level had dropped by nearly a third.

Remaining meat exports are threatened by a more recent EC action. Beginning in November 1990 (January 1991 for beef), the EC banned all imports of U.S. pork and beef, after ruling that U.S. slaughter plants do not meet EC standards. U.S. meat producers believe that the EC action is designed to restrict trade, rather than protect consumer health. In late March 1991, the EC banned all imports of U.S. fresh and chilled horse meat due to allegedly inadequate trichina control.

As the GATT impasse in December revealed, the U.S. and the EC favor different approaches to trade liberalization. Both partners, however, wish to resolve outstanding disputes and lessen trade frictions. [Mary Lisa Madell and C. Philip Brent (202) 219-0610] 

Resources



Farmland Values Rise 2 Percent

Improved financial conditions in the farm sector contributed to a 2-percent gain in U.S. farmland values during 1990. Based on a national survey of farmers and ranchers, the rise to an average of \$682 per acre on January 1, 1991, was the fourth consecutive annual increase. Despite gains totaling 14 percent over the past 4 years, average farmland values were still 17 percent below the record \$823 per acre in 1982.

However, real (inflation-adjusted) average farmland values fell 2 percent in 1990. The 1991 real value remains 46 percent below the 1981 inflation-adjusted peak and is about the same as in 1973. Nominal farmland values, on the other hand, have more than doubled since 1973. However, recent inflation rates of 3 to 4 percent have offset gains in nominal farmland values.

Several factors suggest farmers were in a stronger financial position in 1990 than in recent years. Record crop and livestock receipts helped boost U.S. net cash income and net farm income to near record and record highs. U.S. farm debt edged lower, continuing a decline that

began in 1984. Ratios of debt-to-equity and debt-to-net cash income were also lower in 1990. Interest rates on farm real estate loans in 1990 were about the same as a year earlier.

Farmland values represent investors' discounted stream of expected future incomes. The modest gain in average U.S. farmland value in 1990 suggests that investors correctly anticipated the higher incomes in 1990 and incorporated them into prior-year bids for farmland. Alternatively, the modest gain may reflect investors' expectations of lower farm incomes. Net cash and net farm income are currently forecast to be slightly lower in 1991 than a year earlier.

The recession dampened investor activity, particularly near urban areas. This reduced the demand for farmland for non-agricultural uses, putting downward pressure on farmland prices. Investors may be generally more cautious because of the uncertain recovery of the economy. Also, many remember the rapid build-up of farmland values in the 1970's and early 1980's, followed by sharply lower values in the mid-1980's.

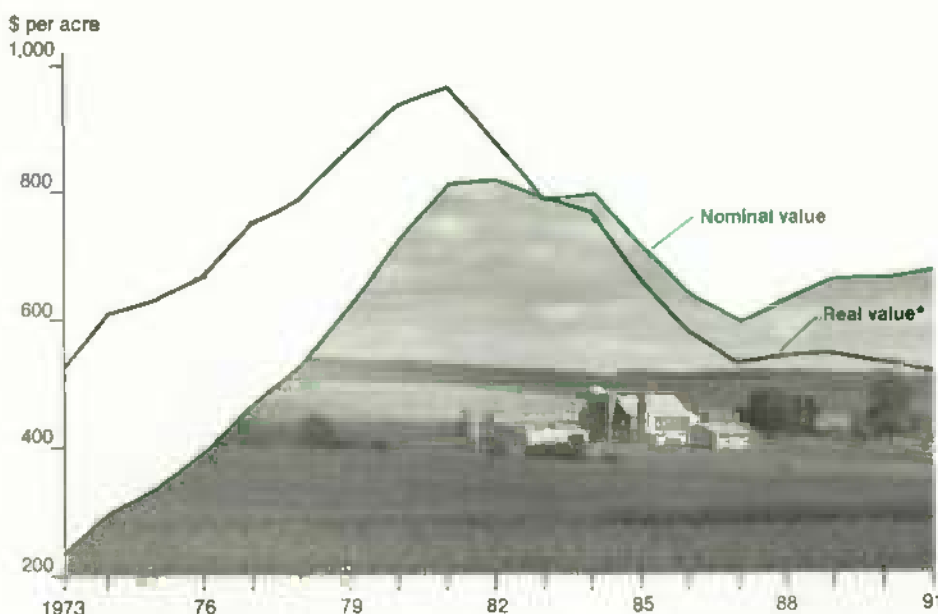
Values Rise the Most In the Lake States

Predominantly agricultural regions registered some of the strongest increases in 1990. Values averaged 8 percent higher in the Lake States, 3 percent in both the Northern Plains and the Corn Belt, and 2 percent in the Delta States. Higher grazing land values and record cattle prices helped support a 7-percent gain in farmland values in the Mountain States, and values advanced 4 percent in the Pacific region.

However, farmland values did not rise in every region. Farmland values were down 1 percent in the Northeast, 5 percent in Appalachia, and 3 percent in the Southern Plains. Values were unchanged in the Southeast.

Cash rents for cropland in 1991 are expected to be about the same as a year earlier in most regions. However, higher rents are expected in the Delta States. Pasture rents are expected to remain near 1990 levels in most areas. [Roger Hexem (202) 219-0423] AO

Nominal Farmland Values Past Modest Rise



*1982 dollars. Nominal and real values intersect in 1983 because real farmland values reflect the previous year's inflation rate

Resources

Farm Machinery Purchases To Pick Up

Depreciation exceeded capital expenditures for tractors, trucks, and other farm machinery each year during 1980-90. This phenomenon, known as capital depletion, was most pronounced in the mid-1980's.

Agricultural production cannot be sustained over a long period without new investment. Eventually, most of the tractors, trucks, and other farm equipment will have to be replaced. And equipment manufacturers and dealers stand to benefit from recent factors that favorably affect the demand for farm machinery, including record and near record farm incomes, lower debt-to-asset ratios, and lower interest rates. In 1991, unit sales of tractors and farm machinery are expected to rise an average of 4 percent from a year earlier.

Equipment Purchases Soared in the 1970's...

Capital expenditures on farm equipment held steady at around \$4 billion a year throughout the 1960's and then increased rapidly in the 1970's, peaking at nearly \$14 billion in 1979. Total farm investment during 1975-80 was \$67 billion, compared with only \$26 billion during 1965-70.

Several factors explain the large increases in farm equipment purchases during the 1970's. First, U.S. grain exports surged, which encouraged farmers to expand acreage.

Second, for much of the decade, crop prices were rising, cash receipts were up, and interest rates, while rising, did not reach the highs of the early 1980's. Finally, debt-to-asset ratios stayed around .17 during the 1970's, compared with the high of .24 in 1985.

...But Collapsed In The Early 1980's

In the early 1980's, the demand for farm machinery began to decline. World production in excess of demand in the late 1970's caused surpluses of several major crops, which lowered crop prices in the early 1980's and reduced farm incomes. Planted acreage decreased as government acreage reduction programs were implemented.

Farmland values fell to new lows which, combined with the high debt incurred during the 1970's, caused the debt-to-asset ratio to climb. Farmers had less cash to buy farm machinery and found lenders reluctant to finance purchases. Capital expenditures on farm machinery slipped to a 14-year low of \$6.1 billion in 1986.

In 1987, farm equipment purchases picked up, and by 1990 reached \$10 billion. Although expenditures on farm machinery increased from 1987 to 1990, unit sales of tractors declined sharply in January 1991.

Tractor sales normally decline in January, but not as much as this year. The decline probably reflected uncertainties

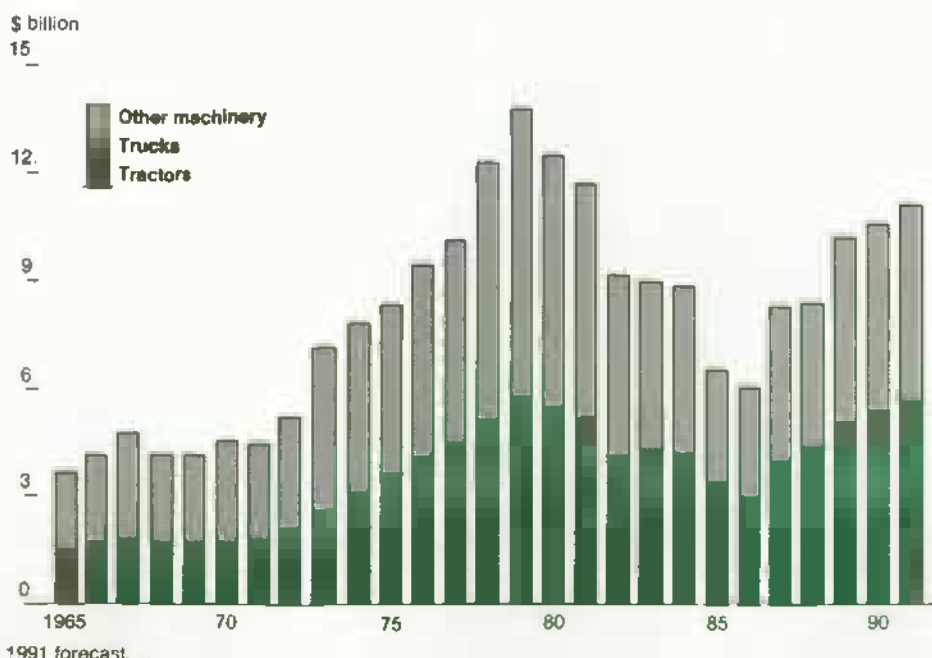
about the Persian Gulf situation and the recent downturn in the economy. Also, farm equipment manufacturers offered special incentives last December, which pushed some equipment purchases forward a month. Sales increased slightly in February.

Depreciation Exceeded Equipment Purchases in 1980's

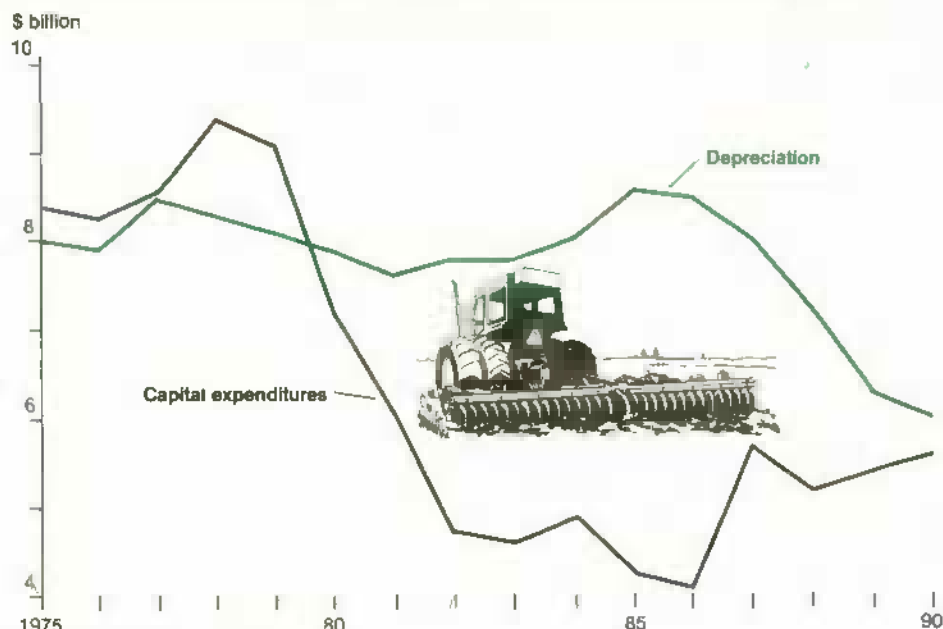
Depreciation of tractors, trucks, and other farm machinery in the U.S. rose steadily after 1965, reaching a high of over \$15 billion in 1982. The big rise during the 1970's was due to increased capital expenditures on farm machinery during those years. Depreciation dropped after 1982, and since 1986 has leveled off at around \$12 billion per year in current dollars.

But the combination of higher depreciation and smaller capital expenditures (with depreciation and expenditures both measured in 1975 dollars) in the early and mid-1980's resulted in a decade of negative capital accumulation. The spread between capital expenditures and depreciation increased rapidly between 1980 and 1982, remained steady through 1986, and decreased from 1986 through 1989.

Sales of Farm Equipment Continue To Climb



Farm Equipment Depreciation Exceeded Capital Expenditures for a Decade



1990 Preliminary. Adjusted for inflation.

In 1989, capital accumulation was negative, but the spread between expenditures and depreciation had narrowed so that capital depletion was only about \$900 million. Capital accumulation is estimated to still have been slightly negative in 1990, but likely will become positive in 1991. At some time farmers have to replace aged tractors, trucks, and other machinery.

Capital Inputs Differ From Other Inputs

Farmers purchase relatively predictable amounts of fertilizer, pesticides, fuel, seeds, and other inputs used each year. These inputs are highly correlated with planted acreage.

Farm machinery purchases, on the other hand, are correlated with farm income, cash receipts, debt-to-asset ratios, machinery prices, and interest rates. Over time, planted acreage and changing tillage practices also influence the demand for farm machinery.

In the short term, however, farmers can usually put off equipment replacement if incomes are low, their debt-to-asset ratios are high, or interest rates are high.

Although delaying the investment may incur higher repair costs, there are usually several years when the difference in cost between keeping the old machine and buying a new one is small.

Another difference between farm machinery and other inputs is that farmers seldom buy more fertilizer and pesticides than they need for the crop year. However, farmers may acquire equipment that exceeds their current needs. Such a buildup likely occurred during the 1970's, allowing farmers to use some of the excess capacity in the 1980's.

Unlike most other inputs, capital inputs are depreciated over time. Methods of depreciation differ depending on purpose. For example, income tax regulations usually allow a greater share of depreciation during the first few years after purchase than in later years. And tax schedules allow farm machinery to be completely depreciated before the end of its useful life.

According to an alternative view of depreciation, to accurately represent the productive life of farm machinery, the equipment logically would be depreciated less during the first years of life when it is more productive, and depreci-

ated more toward the end of its useful life when it is used less. So to the extent that estimated useful life of farm machinery is too short, depreciation will be overstated.

Farm Equipment Industry Is Restructuring

The large swing in farm machinery expenditures from the 1970's to the 1980's caused a major restructuring of the farm machinery industry. In the 1980's, several farm machinery companies suffered severe financial losses, curtailed new spending on manufacturing facilities, and underwent mergers and consolidations.

Now there are only two major U.S. manufacturers of tractors: Deere and Company and J.I. Case Company. While both companies produce their larger tractors in the U.S., many of their smaller horsepower units are produced abroad.

The 1991 U.S. Industrial Outlook reports that farm tractor capacity in the machinery industry is nearly double the demand in Western countries. More structural adjustments are likely in the future, especially if expenditures on farm machinery continue to exhibit large swings like those of the 1970's and 1980's.

The long-term decline in farm numbers and increasing average farm size also are affecting farm equipment sales. Larger farms are likely to more efficiently use larger tractors and equipment than smaller farms. This explains why larger tractors, especially four-wheel-drive units, are commanding increasingly larger shares of total tractor sales. Bigger farms can use fewer, but larger pieces of equipment. [Marlow Vesterby (202) 219-0422] AO

Special Articles



"Net Value Added" Gauges Farming's Contribution to the Economy

Net value added is a useful measure of the income farming generates for producers and others who provide the land, labor, and financing needed to produce crops and livestock. It includes, for example, wages paid to farm laborers and interest payments to farm lenders.

Net farm income and net cash income provide information on the income producers receive from agriculture. Net value added, on the other hand, provides a broader measure of agriculture's contribution to the general economy by emphasizing the income agriculture generates for a wide array of people who contribute to commodity production.

Survey data from USDA's Farm Costs and Returns Survey (FCRS) show U.S. agriculture generated \$66 billion of net value added in 1989, or more than \$2 in net value added for each dollar of net farm income.

No clear-cut consensus exists on how to define value added. The U.S. Department of Commerce estimates the sum of all value added in the economy, commonly called the Gross National Product (GNP), based on National Income and Product Accounting (NIPA) rules. The Commerce Department also measures the farm share of value added, called the gross farm

product, by these same accounting rules. In 1989 the farm share of GNP was \$89 billion, 2 percent of total GNP.

The concept of agricultural net value added presented in this text differs from the Commerce Department concept because this concept adds government payments to farm income, includes depreciation among farm expenses, and excludes the value of the service provided by farm housing from the income generated by agriculture (see box).

Net Value Added Differs Among Production Specialties

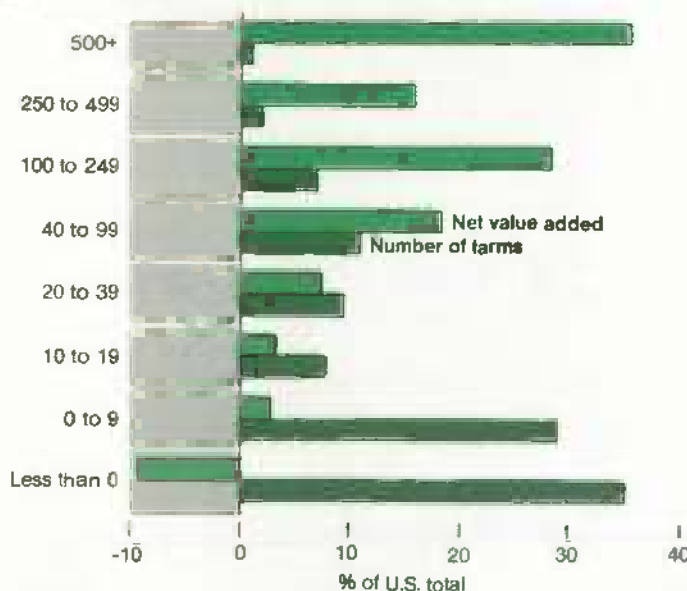
Net value added varies according to the distribution of farm size. As a group, small, part-time, and hobby farmers—who made up almost 35 percent of farmers and ranchers—often used inputs worth more than the income they generate for themselves and others by producing farm products.

At the other end of the spectrum, less than 1 percent of all farms produced about 35 percent of the sector's net value added. In addition, the distribution of farm size varies for each commodity specialty.

The primary reason, besides farm size, why net value added varies among commodity specialties is that input use differs. Net value added, when measured relative to gross farm income, eliminates the effects of farm size when comparing net value added among different commodity specialties. Thus net value added, when expressed as a ratio, can be compared among different commodity specialties based solely on differences in input use.

Over 35 Percent of Net Value Added Comes from 1 Percent of U.S. Farms

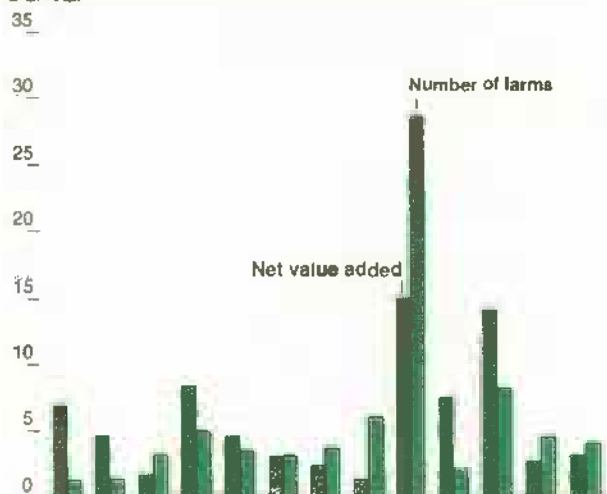
Sales class (thous. \$)



1989 FCRS data.

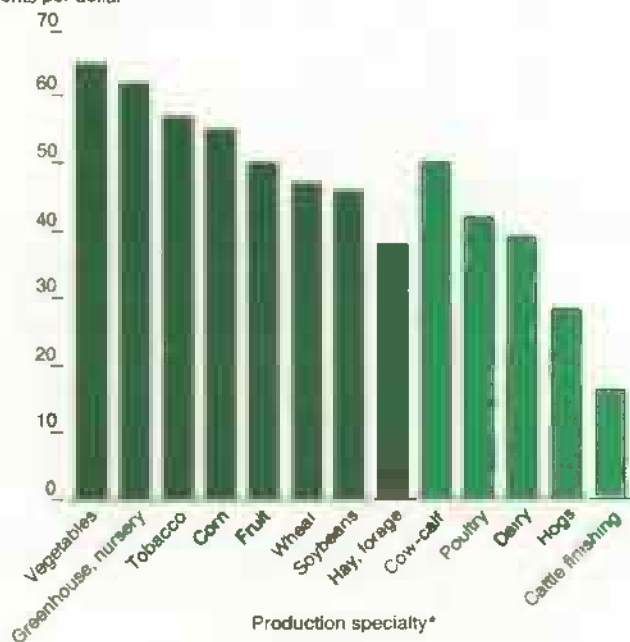
Cow-Calf Farms Provide the Most Net Value Added...

% of U.S. total



...But Vegetable Growers Generate the Most Net Value Added Per Dollar of Gross Income

Cents per dollar



*Commodity accounted for over half the value of the farm's production.
1989 FCRS data.

These ratios are highest for commodity specialties that provide the most income to resource providers—such as those that use the most labor (i.e., vegetables). Commodity specialties that rely more on purchased inputs, such as pesticides and fuel, will have lower ratios (i.e., wheat and soybeans).

In addition, operations where young animals are born and approach maturity generate more net value added than livestock finishing specialties.

Cattle production provides an interesting example. Most beef production in this country takes place in two stages. First, cow-calf operations produce calves not yet ready for slaughter. Finishing operations, the second stage of cattle production, usually buy calves from cow-calf producers and feed the animals until they reach slaughter weight.

Ranchers specializing in cow-calf production had ratios of value added to gross farm income of 0.50 in 1989. That is, they generated \$50 of value added for each \$100 of gross income they earned. Since they produce their own animals and rely more on forage than purchased feed, cow-calf producers have the highest ratio of net value added to gross farm income of any livestock specialty.

Cattle finishing operations, in contrast, have a much lower ratio of net value added to gross income—0.16. That's because the finishing operations depend heavily on purchased inputs—especially feeder animals and feed.

This comparison shows that gross income or sales volume does not adequately describe the impact of a farming operation on the economy. Although finishing operations sell higher valued cattle than cow-calf operations, much of the value added from beef production is created in the cow-calf stage. A cow-calf operation may create more income for the group that provides resources for beef production than a finishing operation with a larger gross income.

Crop producers generally create more net value added per dollar of gross income than livestock producers. Corn farms, despite their image as operations that produce an inexpensive bulk product, had ratios of net value added to gross income of 0.55 in 1989, among the highest of any production specialty.

For wheat farms, about 47 cents of every dollar in gross income represented net value added. Dairy operations generated 39 cents of net value added per dollar of gross income.

Who Gets the Value Added Created by Agriculture?

Overall, farmers received a third of agricultural net value added in 1989, the largest share of any group. However, the share of net value added going to farmers, government, landowners, lenders, laborers, and contractors varies considerably by production specialty.

For corn specialty farms, rental payments were a slightly larger share of net value added than net farm income. Contractors received the lion's share of net value added from vegetable operations. Contractors pay farmers a fee for the labor, land, and equipment services the farmers provide and often provide many of the other inputs used. Farm lenders' share was less

Special Articles

than 5 percent of the net value added generated by vegetable growers, but almost 14 percent of the net value added generated by dairy operations.

Local governments, too, share in value added through property taxes and license fees. In 1989, 7 percent of the net value added created on farms went to local governments. The income received by local governments shows why the operations and financing of some agriculturally dependent rural communities can be significantly affected by shifts in local agriculture.

Overall, Cow-Calf Producers Create the Most Value Added

Making up almost 30 percent of all operations in USDA's Farm Costs and Returns Survey (see box), cow-calf production was the largest commodity specialty in 1989 and accounted for the largest share of net value added. But because many cow-calf operations are small and some have negative net value added, cow-calf producers generated only 15 percent of agricultural net value added.

Vegetable farms are labor intensive, helping to explain why they accounted for almost 7 percent of agriculture's net value added while making up only 1.2 percent of farms. Other farm specialties that account for more net value added than reflected by their numbers are dairy, corn, fruit, and greenhouse and nursery specialties. [John Jenkins and Mary Ahearn (202) 219-0807] **AO**

Value Added Creation by Production Agriculture is a forthcoming Agricultural Economic Report by Jenkins and Ahearn. It will give more detail on how Farm Costs and Returns Survey data were used to measure agricultural net value added.—Ed.

How Is Net Value Added Calculated?

(Examples are in parentheses)

Net value added =

- commodity cash receipts (market returns, net CCC loans)
- + government payments (deficiency, disaster, CRP)
- + other cash farm-related income (machine-hired custom work)
- + value of the change in crop and livestock inventories
- farm origin expenses (farm-produced seed)
- manufactured input expenses (fuel, fertilizer)
- intermediate product expenses (maintenance and repair)
- depreciation

The Largest Proportion of Net Value Added Is Not Always Received by Farmers

Recipient	Farm type			
	All farms	Corn	Vegetables	Dairy
	Percent			
Farmers	33.4	34.2	26.1	62.0
Government	6.9	9.3	2.7	5.8
Landowners	15.0	36.8	7.7	3.7
Lenders	13.0	13.4	4.5	13.9
Labor	14.8	4.4	17.3	14.3
Contractors	16.9	1.9	41.7	0.3

Source: 1989 Farm Costs and Returns Survey, USDA



How Net Value Added Relates to Net and Gross Farm Income

Net value added

- + value of service provided by farm dwellings
- wages paid to farm labor
- value of housing and food supplied to workers
- interest paid to lending institutions
- cash and share rents paid to landlords
- property tax paid
- = net farm income

Net value added

- + value of services provided by farm dwellings
- + depreciation
- + farm origin expenses
- + manufactured input expenses
- + intermediate product expenses
- = gross farm income

See Table 32 in the Statistical Indicators for more information on the components of gross farm income and net farm income.

How Net Value Added Differs from National Income Accounting

The concept of agricultural net value added presented here differs in several ways from the Commerce Department concept. It was designed to capture the income generated by agriculture—not to measure agriculture's contribution to GNP. The most important differences include...

Government payments. In contrast to NIPA methods, direct government payments are treated as net value added by agriculture in this analysis. That's because most payments are not simply subsidies, but are payments for reducing acres of commodity production or meeting environmental goals.

Many government influences on farm incomes, such as import restrictions that bolster sugar prices and product purchases to increase dairy prices, cannot be observed directly. Treating direct payments as net value added allows production specialties that receive direct government payments to be treated consistently with those specialties whose incomes are indirectly enhanced by government intervention.

Depreciation. In NIPA, depreciation is not deducted from farm income when gross farm product is calculated to arrive at a measure of gross value added. Depreciation is included here as a farm expense to form a measure of net value added.

Including depreciation as a farm expense gives information on the income agriculture can produce while at the same time replacing deteriorating equipment. This type of net value added measure treats durable inputs in the same way as inputs that farmers exhaust in the production process, such as fertilizer.

Farm housing. Both net farm income and Commerce's gross farm product include an estimate of the value of the service provided by farm housing. The value of this service often overshadows the incomes that small farms earn through commodity production. To focus the net value added measure more closely on agricultural production, rental services provided by farm housing are excluded.



Special Articles

Where Did the Data Come From?

Farm Costs and Returns Survey (FCRS) data for 1989 provided the information to calculate the net value added estimates presented here. Since it began in 1984, the FCRS has been the most comprehensive annual data source on the expenses and income associated with producing crops and livestock in the 48 contiguous states. The 11,836 farmers interviewed for the 1989 survey statistically represented over 1.7 million farms.

Farmers and ranchers commonly produce several commodities, complicating the classification of farm operations into commodity specialization types. For this research, farms were categorized into production specialties by identifying the commodity for each that accounted for more than 50 percent of the value of farm production. About 90 percent of the 1989 FCRS observations could be classified using this method.

Because this analysis relied on FCRS data, net value added estimates reported here would not match the official estimates reported by the Department of Commerce even if there were no differences in the definitions of value added. Commerce estimates are built from the official estimates of net farm income measured by USDA, which are constructed from multiple data sources, including the FCRS.

Upcoming Reports from USDA's Economic Research Service

The following are May release dates for summaries of the ERS reports listed. Summaries are issued at 3 p.m. Eastern time.

May

- 6 Developing Economies
- 14 USSR
- 15 Livestock & Poultry
- 17 Agricultural Outlook
- 20 Wheat
- 23 Feed
- 28 Cotton & Wool
- 29 Exports



Climate Change Could Cause Shifts In Production

Emissions of certain gases are contributing to changes in the earth's climate. International efforts are underway to analyze and begin addressing possible concerns.

In June 1992, delegates to the U.N. Conference on Environment and Development are expected to agree to a framework for reducing greenhouse gas emissions into the atmosphere and reducing the potential for global climate change. Formal negotiations to draft a global climate treaty opened near Washington, D.C. earlier this year. In 1988, the U.S. and other nations agreed within the U.N. Environment Program and the World Meteorological Organization to establish an Intergovernmental Panel on Climate Change (IPCC).

Agriculture has the potential to both contribute to global climate change and be affected by it. While great uncertainty exists about aspects of global climate change, the IPCC concluded that global warming over the next 60 years could result in increased warming and decreased soil moisture in major grain and soybean growing areas in the U.S. and Western Europe. More northern latitudes are predicted to experience greater warming and increased precipitation and soil moisture.

Based on such climate scenarios, crop yields generally have been projected to be reduced in the central and southern parts of

the U.S. and Western Europe. In contrast, yields are projected to rise in parts of the Soviet Union and Canada.

While some shifting in agricultural production is expected if global warming occurs, current estimates show that the net economic impact likely would be small due to a combination of yield increases and decreases across the globe. Such adjustments will entail costs for some producers.

However, the IPCC estimates are far from conclusive. Among climate change models, considerable differences exist for individual geographic regions. Some yield more severe climate changes while others predict more moderate changes.

If the growth in trace gases is unchecked, the climate change effects could be larger. The possibility of faster climate change or a more dramatic impact on agriculture cannot be ruled out. And finally, the ability of farmers to adapt to climate change, and even to take advantage of new climate conditions, has not been factored into existing estimates.

Agriculture Contributes To Greenhouse Emissions

Increases in atmospheric concentrations of certain manmade gases help slow the release of solar radiation from the earth's surface back into space. This "greenhouse effect" is believed by some climate analysts to increase the potential for global warming.

The U.S. Environmental Protection Agency (EPA) has estimated that during the 1980's, carbon dioxide accumulation contributed about one-half of the estimated additional retention of solar radiation above that contributed by water vapor. The EPA also estimates that methane contributed about 19 percent, chlorofluorocarbons 14 percent, nitrous oxide 5 percent, and other gases about 13 percent.

Agriculture contributes to the increasing atmospheric concentrations of carbon dioxide, methane, and nitrous oxide. Rice production, animal flatulence, land clearing, and the burning of plants, wood, forests, and crop residue are chief contributors.

When combined with forestry, agriculture has accounted for about one-quarter of total greenhouse emissions related to human activities between 1880 and 1980. Emissions from agricultural sources may increase slowly but without the introduction of any mitigating activities, they are likely to fall as a share of total emissions because other sources are projected to grow more rapidly.

Models Predict Climate Changes

Projections of climate changes are made by complex computer models known as general circulation models. These models have limited ability to predict the impact of climate changes on

agriculture due to poor regional detail, difficulty in projecting differences between average summer and winter temperatures, and weakness in predicting climate fluctuations during the transition to a new climate.

However, the models do suggest several general changes in agriculture within broad geographic zones. A summary of the model results published by the IPCC indicates that an effective doubling of the atmosphere's carbon dioxide concentration (predicted by many scientists to occur in approximately 60 years) could cause several changes:

- Global mean surface temperature could increase as greenhouse gases partially block or absorb heat radiating from the earth. The global mean temperature could rise 0.2 to 0.4° C (0.4 to 0.7° F) per decade, or about 3° C (5.5° F) before the end of the next century.
- Regional climate changes could differ from the global mean change. Surface air will warm faster over land than over oceans. As a result, warming is estimated to be 50-100 percent greater in the high northern latitudes during winter. Temperature increases in southern Europe and central North America also are estimated to be greater than the global mean.
- Winter precipitation could increase 5-10 percent in the middle and high latitude continents. But summer precipitation and soil moisture could be reduced in southern Europe and central North America.

The IPCC predictions carry with them substantial uncertainties due to the large number of variables involved and the limited knowledge of relationships among variables. However, results of the climate models indicate that increased precipitation, warming, and longer growing seasons would generally enhance agricultural production in the high northern latitudes. But in the northern middle latitudes, drying in the interior of the continents combined with warming could lead to lower crop yields.

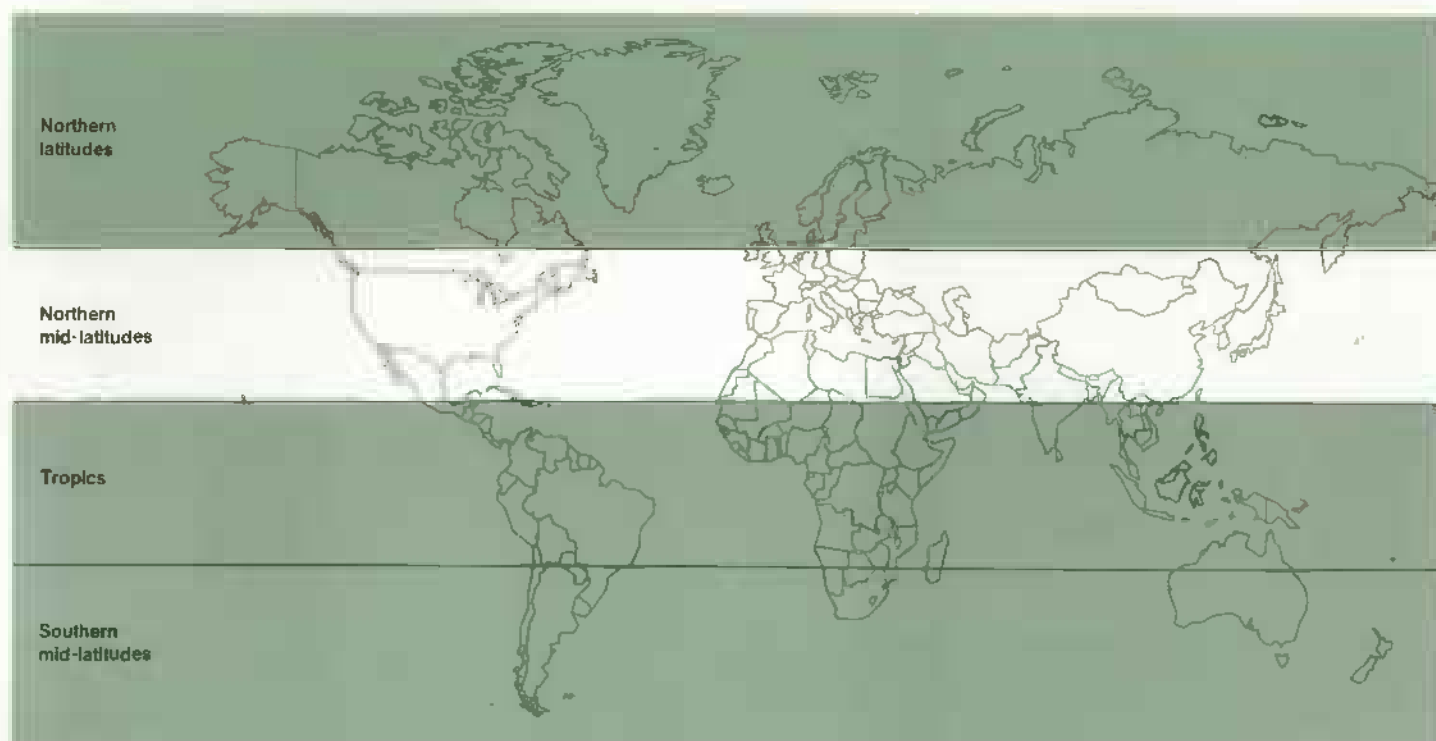
Adaptation & Innovation Will Be Critical

Farmers' responses to a changing climate and technological advances are expected to play an important role in mitigating any negative impact of climate change on agriculture. Both offer the possibility to reduce the yield losses caused by climate change or increase the yield benefits from a more favorable climate change.

Some researchers estimate that agriculture could completely adapt to a doubling of carbon dioxide in the atmosphere in 25 years. This rate of adaptation is certainly within the bounds of the climate change phenomenon expected to take place in the next 50 to 100 years.

Special Articles

Warmer and Drier Weather Is Expected Across Much of the Northern Mid-Latitudes*



*Based on general circulation model predictions.

General Circulation Models Indicate a Doubling of Carbon Dioxide in the Atmosphere by 2050 Could Produce the Following Changes

Northern latitudes: *Above-average warming and increased precipitation, increased yields.*

Northern mid-latitudes: *Above-average warming and drier summers, reduced yields.*

Tropics: *Warming, uncertain precipitation and yield changes.*

Southern mid-latitudes: *Warming, some precipitation and yield increases.*

A variety of adaptive responses is available. For example, choosing crop varieties better suited to changing climatic conditions could considerably reduce negative effects. And earlier plantings could offset heat and moisture stress and be used to adapt to a warmer and, possibly, drier summer.

In many cases, the best response to climate change may be a combination of adjustments. For example, a recent study found that Japanese rice yields increase dramatically under altered climatic conditions when adjustments in planting dates are combined with the substitution of different strains of rice.

Enhanced conservation of soil and water is another possible response. Erosion control and soil water management can be improved through minimum tillage farming techniques, the use of windbreaks, drip irrigation, more efficient fertilizer and pest management, and the adoption of appropriate cultivars. However, these adjustments are not cost free.

Potential adjustment costs could take a variety of forms. Climate change could adversely affect agriculture through greater abundance of weeds, increased plant and animal disease, changes in soil nutrients and pests, and increased competition

for available water. These effects are probably controllable, but it is not known how much the controls will cost or what their effect will be on agricultural resources and the environment.

Other Factors Could Affect Yields

An important consideration is the effect of increased carbon dioxide on plant growth. A carbon-dioxide-enriched atmosphere is widely believed to promote plant growth and lead to more efficient water use. This positive influence is called the carbon dioxide fertilization effect. But measurements of its effects are not certain.

Despite the limits of scientific knowledge, some crop response studies have attempted to take into account both altered climatic conditions and the direct effect of climate change on plant growth. They show that yields could increase significantly with enhanced carbon dioxide levels. For example, in sub-Arctic regions of the Soviet Union, it was found that the carbon dioxide fertilization effect increased yields 17 percent.

A report by the National Climate Program Office concluded that the fertilization effect from a doubling of carbon dioxide concentration could enhance global crop yields 15 percent.

U. S. Grain Yields Could Be Reduced

A variety of studies have estimated yield effects of climate change for different regions of the world. The EPA has estimated the effects on agriculture from a doubling of carbon dioxide in the atmosphere using two different climate model forecasts. Both models predict warming and drying for most agricultural areas of the U.S. Yet other models suggest increased precipitation and little reduction in available water.

The first EPA model predicts more severe warming and drying with heightened effects during the summer growing season. Assuming no adaptive responses by farmers and no technological innovations, and excluding the carbon dioxide fertilization effect, the simulation suggests yield declines of 25-60 percent for U.S. corn, soybeans, and wheat. The second, more moderate, EPA climate model estimates U.S. yield losses of 16-35 percent for the same crops. Yield losses are estimated for most crops in Canada except in the northern regions.

Another study found agricultural productive potential to decrease substantially in the Mediterranean region of Europe due to less soil moisture in the summer and, possibly, winter. Yield declines were projected to be less severe for other parts of western Europe. And it also found wheat and spelt (a cereal intermediate between wheat and rye) yields in Germany, France, and Belgium could decline by 9, 12, and 7 percent.

Other studies contradict the general pattern of effects in the northern middle latitudes. For instance, Japan could realize

effects much different than the U.S. and Europe. While Japan falls within the category of northern middle latitude countries, models do not strongly support reduced yields due to a projected increase in precipitation.

The other studies also show that in China, global warming could lead to a weaker winter monsoon, but a stronger summer monsoon. And China's agriculture could benefit if coastal rainfall penetrated further west and north.

The effects of climate change in Argentina are estimated with even less confidence, although some general circulation models show an increase in rainfall in currently moist areas. And in Australia there are indications that a doubling of carbon dioxide concentration could lead to increased summer rainfall in the major agricultural regions. This could lead to substantial productivity increases in the northern portion of the country, and to smaller increases in the southern portions.

Less is known about the effects of climate change on agriculture in the tropical latitudes encompassing much of Africa, Latin America, and Southeast Asia. Production potential in these regions depends on water availability, yet the regional pattern of possible changes in precipitation is unclear.

However, water availability may decrease in some tropical regions even without any change in current precipitation patterns. This is because the amount of moisture that plants return to the air increases more than proportionally with rising temperature.

Thus, the potential for drought with a 1-degree rise in temperature in areas with already high average temperatures is greater than in cooler areas. Under these circumstances, regional food supplies could be disrupted even with a small decline in water availability.

Model Predicts Economic Impact Would Be Small

The economic effects of an assumed climate change on world agriculture have been estimated using an international model of agricultural markets developed by USDA.

The model describes supply and demand conditions for 22 agricultural commodities and 13 countries or regions. Climate changes induced by a doubling of carbon dioxide in the atmosphere during the next 60 years are introduced in the model as increases or decreases in yields for specific countries or regions. The model then solves for a new set of consumption, production, and price relationships based on the changed yields.

Two alternative scenarios, one moderate and the other adverse, illustrate the effects of a doubling of carbon dioxide concentration by 2050. Because farmer responses to climate change and the carbon dioxide fertilization effect are not assumed, the yield changes are likely to overstate the actual changes.

Special Articles

Under the moderate impact scenario, there is a small decline in the price of primary products, and a small increase in the price of secondary products. But under the adverse scenario, world prices of primary and secondary agricultural products are estimated to be 41 and 37 percent greater than without the doubling of carbon dioxide in the atmosphere.

The large price increases projected in the adverse impact scenario are due to more pessimistic yield assumptions compared with the moderate impact scenario. In the adverse impact scenario, significantly more negative yield effects were assumed than in the moderate impact scenario for the U.S., China, and the Soviet Union. These countries are among the world's largest producers of corn, soybeans, rice, and wheat.

Three conclusions can be drawn about the impact of climate change on world agriculture. First, positive as well as negative effects appear possible. Because specific climate effects over the next 60 years remain difficult to predict, it is unclear whether the net effect will be to reduce or increase global food availability.

Second, even assuming relatively large, negative effects on yields, the economic impacts on individual countries are estimated to be small, with some gainers and some losers. The net impact on world income is negative but very modest (less than one-half percent of total world income) even under the more pessimistic scenario.

For most countries the estimated economic loss due to climate change is less than 1 percent of national income. For most developed countries, agriculture only accounts for about 3 percent of national income. The effects of climate change are potentially more important to developing countries where agricultural production averages 20 percent of total income. In some of the simulation scenarios, the economic effects on China, for example, exceeded 1 percent of income.

However, concern still arises because small negative effects on agricultural production in countries with large and rapidly growing populations may cause food shortages even if global food resources are adequate. Also, the adjustment costs of climate change and the effects of a climate change beyond that of a doubling of carbon dioxide in the atmosphere were not assessed.

Third, the effect of climate change cannot be measured only by changes in domestic yields. It also depends on the relative size of the agricultural producing and consuming sectors and the direction and magnitude of world price changes.

Countries with large agricultural production relative to consumption are net exporters. In these countries, an increase in world agricultural prices (associated with lower global food production) and an increase in their yields would generally improve overall economic welfare. [John Reilly (202) 219-0450 and James Tobey (202) 219-0403] AO

Note: For a description of the USDA model see *A Static World Policy Simulation (SWOPSIM) Modeling Framework*, USDA-ERS, 1986.—Ed.



World Agriculture

Current Trends and Perspectives

Subscribe to **World Agriculture** and keep up with the most current information on world agricultural production, trade, and resource use.

World Agriculture, recently revised and expanded, is a quarterly periodical dedicated to publishing authoritative, topical articles dealing with worldwide developments in agricultural markets and trade. Each article is based on individual or joint research and analysis underway in USDA's Economic Research Service (ERS) or in other research institutions with which ERS has working relationships.

World Agriculture regularly updates current conditions and recent economic changes, highlights significant trends, and discusses market fundamentals in major markets—all with a particular emphasis on implications for global and U.S. agricultural trade.

Each issue also features two or three special articles written by specialists who assess major economic and trade policy issues around the world and the stake for U.S. agriculture.

Save money by subscribing for more than one year!

For *fastest* service, call our toll-free order desk, 1-800-999-6779 in the United States and Canada; other areas, call 301-725-7927.

Yes! I want to subscribe to *World Agriculture*.

	1 year	2 years	3 years
Domestic	___ \$21.00	___ \$41.00	___ \$60.00
Foreign	___ \$26.25	___ \$51.25	___ \$75.00

• Use purchase order, check drawn on U.S. bank, cashier's check, or international money order.

• Make payable to ERS-NASS.

Payment method:

☐ Bill me. Enclosed is \$_____. ☐ MasterCard ☐ VISA Total charges \$_____.

Credit card number:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Expiration date

--	--

Month Year

Name _____

Organization _____

Address _____

City, State, Zip _____

Daytime phone () _____

Mail to:

**ERS-NASS
P.O. Box 1608
Rockville, MD
20849-1608**

Statistical Indicators

Summary Data

Table 1.—Key Statistical Indicators of the Food & Fiber Sector

	1989		1990		1991				
	IV	Annual	IV	Annual	I	II F	III F	IV F	Annual F
Prices received by farmers (1977=100)	147	147	145	150	145	143	144	141	—
Livestock & products	166	160	167	171	167	164	165	163	—
Crops	127	134	122	128	123	121	121	119	—
Prices paid by farmers, (1977=100)									
Production items	165	165	174	171	173	—	—	—	—
Commodities & services, interest, taxes, & wages	178	178	187	184	187	—	—	—	—
Cash receipts (\$ bil.) 1/	162	159	164	167	160	169	174	163	165-170
Livestock (\$ bil.)	89	84	89	89	85	85	89	90	85-89
Crops (\$ bil.)	73	75	74	78	74	84	85	74	77-81
Market basket (1982-84=100)									
Retail cost	127	125	135	134	—	—	—	—	—
Farm value	108	107	110	114	—	—	—	—	—
Spread	137	134	149	144	—	—	—	—	—
Farm value/retail cost (%)	30	30	28	30	—	—	—	—	—
Retail prices (1982-84=100)									
Food	127	125	134	132	136	—	—	—	135-139
At home	126	124	134	132	136	—	—	—	135-137
Away from home	130	127	135	133	137	—	—	—	138-141
Agricultural exports (\$ bil.) 2/	10.6	39.7	9.9	40.1	11.3	8.8	8.4	—	37.0
Agricultural imports (\$ bil.) 2/	5.4	21.6	5.4	22.5	5.8	5.5	5.3	—	22.5
Commercial production									
Red meat (mil. lb.)	10,105	39,418	9,852	38,608	9,483	9,695	9,997	10,208	39,381
Poultry (mil. lb.)	5,727	22,039	6,134	23,631	5,960	6,230	6,315	6,420	24,925
Eggs (mil. doz.)	1,415	5,598	1,445	5,600	1,420	1,430	1,425	1,445	5,720
Milk (bil. lb.)	34.9	144.3	36.3	148.3	37.6	39.2	36.9	36.5	150.2
Consumption, per capita *									
Red meat and poultry (lb.)	54.9	210.4	54.9	210.4	51.8	53.4	54.7	56.9	216.8
Corn beginning stocks (mil. bu.) 3/	3,419.3	4,259.1	1,344.5	7,082.1	6,940.0	4,788.7	—	—	6,940.0
Corn use (mil. bu.) 3/	1,489.2	7,260.2	2,338.1	8,113.4	2,151.9	—	—	—	7,920.0
Prices 4/									
Choice steers—Neb. Direct **	74.13	73.86	80.90	78.56	79.50	77-83	75-81	77-83	77-82
Barrows & gilts—7 mths. (\$/cwt)	47.42	44.03	51.67	54.45	51.50	51-57	52-58	47-53	50-55
Broilers—12-city (cts./lb.)	49.8	59.0	48.8	54.8	51.2	49-55	53-59	47-53	50-55
Eggs—NY gr. A large (cts./doz.)	92.6	81.9	88.5	82.2	85.9	69-75	71-77	73-79	74-79
Milk—all at plant (\$/cwt)	15.47	13.57	12.63	13.77	11.63	10.60-11.10	10.95-11.55	11.45-12.45	11.10-11.70
Wheat—KC HRW ordinary (\$/bu.)	4.34	4.36	2.79	3.44	2.81	—	—	—	—
Corn—Chicago (\$/bu.)	2.36	2.55	2.30	2.52	2.45	—	—	—	—
Soybeans—Chicago (\$/bu.)	5.70	6.70	5.86	5.93	5.70	—	—	—	—
Cotton—Avg. spot 41-34 (cts./lb.)	67.1	63.7	70.0	71.3	75.4	—	—	—	—
	1983	1984	1985	1986	1987	1988	1989	1990	1991 F
Gross cash income (\$ bil.)	150.6	155.5	157.2	152.0	164.3	170.4	177.5	183	180-185
Gross cash expenses (\$ bil.)	111.0	119.0	109.3	105.2	108.2	112.3	122.8	125	124-130
Net cash income (\$ bil.)	39.5	36.6	47.9	46.7	56.1	58.1	54.6	58	53-58
Net farm income (\$ bil.)	15.3	26.3	31.0	31.0	41.3	41.8	48.7	49	42-47
Farm real estate values 5/									
Nominal (\$ per acre)	788	801	713	640	590	632	661	668	682
Real (1982 \$)	788	771	662	577	526	538	545	529	519

1/ Quarterly data seasonally adjusted at annual rates. 2/ Annual data based on Oct.-Sept. fiscal years ending with year indicated. 3/ Dec-Feb. first quarter; Mar.-May second quarter; June-Aug. third quarter; Sept.-Nov. fourth quarter; Sept.-Aug. annual. Use includes exports & domestic disappearance. 4/ Simple averages. 5/ 1990-91 values as of January 1. 1986-89 values as of February 1. 1982-85 values as of April 1. F = forecast, — = not available.

* The pork carcass to retail conversion factor has been revised. ** Omaha Choice steer price has been replaced by the Nebraska Direct, 1,100-1,300 lb. Choice steer price.

U.S. and Foreign Economic Data

Table 2.—U.S. Gross National Product & Related Data

	Annual			1989				1990			
	1988	1989	1990 R	IV	I	II	III	IV R			
\$ billion (quarterly data seasonally adjusted at annual rates)											
Gross national product	4,873.7	5,200.8	5,465.1	5,289.3	5,375.4	5,443.3	5,514.8	5,527.3			
Personal consumption expenditures	3,238.2	3,450.1	3,657.3	3,518.5	3,588.1	3,622.7	3,693.4	3,724.9			
Durable goods	457.5	474.8	480.3	471.2	492.1	478.4	482.3	468.5			
Nondurable goods	1,060.0	1,130.0	1,193.7	1,148.8	1,174.7	1,179.0	1,205.0	1,216.0			
Clothing & shoes	191.1	204.6	213.2	208.7	212.9	212.8	215.8	211.5			
Food & beverages	562.8	595.3	624.7	602.2	618.4	623.3	629.8	629.4			
Services	1,720.7	1,845.5	1,983.3	1,898.5	1,921.3	1,985.3	2,008.2	2,040.4			
Gross private domestic investment	747.1	771.2	741.0	762.7	747.2	759.0	750.7	696.3			
Fixed investment	720.8	742.9	746.1	737.7	758.9	745.8	750.7	729.2			
Change in business inventories	26.2	28.3	-5.0	25.0	-11.8	13.4	9.0	-30.8			
Net exports of goods & services	-74.1	-46.1	-31.2	-35.3	-30.0	-24.9	-41.3	-28.8			
Government purchases of goods & services	962.5	1,025.6	1,098.1	1,043.3	1,070.1	1,086.4	1,102.8	1,132.9			
1982 \$ billion (quarterly data seasonally adjusted at annual rates)											
Gross national product	4,018.9	4,117.7	4,157.3	4,133.2	4,150.6	4,155.1	4,170.0	4,163.4			
Personal consumption expenditures	2,606.5	2,656.8	2,681.6	2,669.9	2,677.3	2,678.8	2,696.6	2,673.6			
Durable goods	418.2	426.0	427.4	423.1	437.6	426.8	429.5	415.6			
Nondurable goods	909.4	919.9	911.1	923.0	915.6	911.2	916.4	901.2			
Clothing & shoes	185.0	172.7	172.6	175.1	174.2	171.3	174.4	170.6			
Food & beverages	462.2	462.9	457.4	460.3	457.4	459.3	459.4	453.6			
Services	1,278.9	1,309.0	1,343.1	1,323.8	1,324.2	1,340.8	1,350.8	1,356.7			
Gross private domestic investment	705.7	718.9	688.7	709.1	700.7	700.7	697.0	656.3			
Fixed investment	682.1	693.1	692.3	690.2	702.9	691.2	692.3	682.7			
Change in business inventories	23.6	23.8	-3.6	18.9	-2.2	9.5	4.7	-26.4			
Net exports of goods & services	-75.9	-54.1	-33.8	-47.9	-35.4	-44.8	-46.5	-8.8			
Government purchases of goods & services	780.5	796.1	820.8	802.2	807.9	820.2	822.7	832.3			
GNP implicit price deflator (% change)	3.3	4.1	4.1	3.8	4.8	4.7	3.7	2.6			
Disposable personal income (\$ bil.)	3,479.2	3,725.5	3,945.6	3,799.8	3,887.7	3,925.7	3,969.1	4,001.9			
Disposable per. income (1982 \$ bil.)	2,800.5	2,869.0	2,893.5	2,883.2	2,900.9	2,902.8	2,898.0	2,872.4			
Per capita disposable per. income (\$)	14,123	14,973	15,695	15,210	15,527	15,639	15,765	15,849			
Per capita dis. per. income (1982 \$)	11,368	11,531	11,509	11,541	11,586	11,664	11,511	11,376			
U.S. population, total, incl. military abroad (mil.)	246.4	248.8	251.4	249.8	250.4	251.0	251.8	252.5			
Civilian population (mil.)	244.1	246.6	249.2	247.6	248.2	248.8	249.6	250.0			
	Annual			1990				1991			
	1988	1989	1990 P	Feb	Nov	Dec	Jan	Feb			
Monthly data seasonally adjusted											
Industrial production (1987=100)	105.4	108.1	109.2	108.5	108.3	107.2	106.6	105.7			
Leading economic indicators (1982=100)	142.7	144.9	144.0	144.1	139.9	139.7	139.0	140.5			
Civilian employment (mil. persons)	115.0	117.3	117.9	118.1	117.4	117.6	118.9	118.9			
Civilian unemployment rate (%)	5.4	5.2	5.4	5.2	5.8	6.0	6.1	8.4			
Personal income (\$ bil. annual rate)	4,070.8	4,384.3	4,645.5	4,561.6	4,716.2	4,743.3	4,724.3	4,735.9			
Money stock—M2 (daily avg.) (\$ bil.) 1/	3,072.4	3,223.1	3,330.5	3,255.0	3,325.8	3,330.5	3,333.3	3,357.1			
Three-month Treasury bill rate (%)	6.89	8.12	7.51	7.76	7.07	6.81	6.30	5.95			
AAA corporate bond yield (Moody's) (%)	9.71	9.26	9.32	9.22	9.30	9.05	9.04	8.83			
Housing starts (1,000) 2/	1,488	1,376	1,193	1,459	1,130	971	850	989			
Auto sales at retail, total (mil.)	10.6	9.9	9.5	9.6	8.8	8.9	7.8	8.3			
Business inventory/sales ratio	1.49	1.50	1.49	1.48	1.50	1.53	1.56	—			
Sales of all retail stores (\$ bil.)	137.6	145.1	150.6	150.6	152.7	149.8	147.6	148.9			
Nondurable goods stores (\$ bil.)	85.3	90.8	96.0	94.8	98.6	97.3	96.8	99.8			
Food stores (\$ bil.)	27.2	28.8	30.2	29.9	30.7	30.8	31.2	30.9			
Eating & drinking places (\$ bil.)	13.9	14.5	15.2	15.1	15.2	15.2	15.2	15.3			
Apparel & accessory stores (\$ bil.)	7.1	7.6	7.9	7.9	7.8	7.7	7.5	7.6			
	Annual			1990		1991					
	1988	1989	1990	Mar	Dec	Jan	Feb	Mar			
Foreign exchange value of the dollar											
Japanese yen per U.S. dollar	128.2	137.9	145.7	153.2	133.8	131.5	130.2	136.1			
German mark per U.S. dollar	1.757	1.874	1.677	1.704	1.500	1.487	1.480	1.550			

1/ Annual data as of December of the year listed. 2/ Private, including farm. R = revised. P = preliminary. — = not available.

Information contact: Ann Duncan (202) 219-0313.

Table 3.—Foreign Economic Growth, Inflation, & Export Earnings

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991 F	1992 F	Average 1980-89
Annual percent change												
World, less U.S.												
Real GDP	1.1	2.0	4.3	3.8	2.7	3.8	4.3	3.4	1.8	1.8	3.4	3.0
Consumer prices	13.1	11.8	12.5	13.0	9.1	11.4	17.7	31.9	53.8	27.8	14.5	15.0
Merch. exports	-7.9	-1.5	5.4	1.8	11.7	18.8	12.8	7.3	12.4	9.7	8.4	8.8
Developed less U.S.												
Real GDP	1.0	2.2	3.9	3.5	2.7	3.5	4.4	4.0	3.8	2.3	3.2	2.9
Consumer prices	8.2	5.8	4.9	4.5	2.7	2.8	2.9	4.3	4.8	4.8	4.4	5.7
Merch. exports	-4.4	-0.5	6.3	4.8	19.5	17.7	12.3	8.0	16.4	11.1	8.0	7.5
Developing												
Real GDP	1.9	1.3	4.5	4.5	2.8	4.1	4.2	3.4	2.5	2.2	5.8	3.4
Consumer prices	25.3	32.7	38.2	39.8	27.0	35.5	57.0	78.0	159.5	68.0	34.7	39.0
Merch. exports	-13.3	-3.3	3.8	-3.2	-3.5	21.8	13.3	10.3	5.8	6.8	12.3	5.1
Asia, Incl. China												
Real GDP	5.7	8.0	7.5	7.3	5.8	8.9	8.6	5.3	8.1	5.3	6.2	6.7
Consumer prices	6.4	6.8	6.1	6.0	5.6	7.4	11.8	10.1	6.2	9.4	9.3	8.2
Merch. exports	-0.5	4.6	14.6	-0.9	8.8	30.1	23.1	11.5	9.1	11.8	13.9	12.8
Latin America												
Real GDP	-1.5	-2.7	3.3	3.3	3.8	3.4	0.7	1.2	-1.2	1.4	3.8	1.7
Consumer prices	67.1	108.7	133.5	145.1	82.1	115.8	216.9	342.7	623.8	208.7	93.6	132.7
Merch. exports	-10.6	-0.2	6.3	-5.5	-17.9	13.7	13.9	12.4	5.6	4.5	5.3	4.8
Africa												
Real GDP	-1.7	-0.6	-0.6	3.4	-0.9	0.8	2.3	2.8	2.8	2.5	2.2	0.4
Consumer prices	13.1	18.0	20.6	13.2	12.5	13.0	19.2	22.7	17.6	16.6	14.8	17.0
Merch. exports	-27.9	15.2	-1.0	-2.5	-17.4	14.7	-2.8	15.1	21.9	3.9	5.5	1.4
Middle East												
Real GDP	2.9	-1.6	2.9	2.3	2.0	1.5	1.4	3.9	-2.6	-8.5	11.9	2.1
Consumer prices	12.9	11.9	14.3	17.1	14.9	19.2	19.4	14.5	19.1	18.9	15.5	15.8
Merch. exports	-21.1	-22.2	-10.5	-6.7	-19.6	24.2	1.6	28.1	22.3	-3.3	17.7	-1.2
Eastern Europe, Incl. USSR												
Real GDP	2.0	3.0	1.8	1.8	3.0	1.4	4.2	1.0	-4.7	-4.5	-0.1	2.1
Consumer prices	12.8	6.4	4.2	6.0	7.4	8.9	15.5	67.3	87.0	59.8	24.4	14.9
Merch. exports	1.3	3.7	1.8	0.2	8.2	6.1	3.0	0.1	-4.3	4.8	3.6	4.8

F = forecast.

Information contact: Alberto Jerardo, (202) 219-0708.

Farm Prices

Table 4.—Indexes of Prices Received & Paid by Farmers, U.S. Average

	Annual			1990				1991		
	1988	1989	1990	Mar	Oct	Nov	Dec	Jan	Feb R	Mar P
1977=100										
Prices received										
All farm products	138	147	150	150	148	148	143	145	145	148
All crops	128	134	128	129	120	124	121	123	122	128
Food grains	138	150	123	143	101	100	100	102	103	108
Feed grains & hay	120	128	123	122	114	113	115	117	118	121
Feed grains	117	123	118	117	108	108	110	112	114	118
Cotton	95	98	107	106	112	113	109	106	112	121
Tobacco	132	145	148	147	151	152	152	154	154	153
Oil-bearing crops	108	102	83	89	95	96	96	95	93	93
Fruit, all	185	192	191	185	181	205	194	208	197	217
Fresh market 1/	197	203	202	194	194	221	204	221	207	232
Commercial vegetables	140	151	154	141	158	162	148	148	142	142
Fresh market	135	144	144	130	150	161	135	138	131	130
Potatoes & dry beans	124	188	181	228	118	132	138	137	133	135
Livestock & products	150	160	171	171	171	168	164	166	166	169
Meat animals	168	174	193	190	198	190	190	193	198	199
Dairy products	126	140	142	141	138	132	123	121	121	119
Poultry & eggs	118	137	131	145	129	127	129	134	122	130
Prices paid										
Commodities & services,										
Interest, taxes, & wage rates	170	178	184	—	187	—	—	187	—	—
Production items	157	187	171	—	174	—	—	173	—	—
Feed	128	135	128	—	124	—	—	123	—	—
Feeder livestock	192	194	213	—	219	—	—	218	—	—
Seed	150	165	185	—	163	—	—	163	—	—
Fertilizer	130	137	130	—	132	—	—	132	—	—
Agricultural chemicals	126	132	138	—	141	—	—	141	—	—
Fuels & energy	186	181	204	—	238	—	—	219	—	—
Farm & motor supplies	148	155	154	—	158	—	—	156	—	—
Autoes & trucks	216	223	231	—	233	—	—	233	—	—
Tractors & self-propelled machinery	181	193	202	—	208	—	—	208	—	—
Other machinery	197	208	218	—	220	—	—	220	—	—
Building & fencing	138	141	144	—	144	—	—	144	—	—
Farm services & cash rent	148	158	168	—	168	—	—	172	—	—
Int. Payable per acre on farm real estate debt	152	177	174	—	174	—	—	173	—	—
Taxes payable per acre on farm real estate	147	152	157	—	157	—	—	162	—	—
Wage rates (seasonally adjusted)	172	188	192	—	186	—	—	186	—	—
Production items, interest, taxes, & wage rates	160	187	172	—	174	—	—	174	—	—
Ratio, prices received to prices paid (%) 2/	82	83	82	83	78	78	78	78	78	79
Prices received (1910-14=100)	832	673	684	686	667	664	654	663	661	676
Prices paid, etc. (parity index) (1910-14=100)	1,187	1,221	1,285	—	1,289	—	—	1,289	—	—
Parity ratio (1910-14=100) (%) 2/	64	55	64	—	62	62	61	61	—	—

1/ Fresh market for noncitrus; fresh market & processing for citrus. 2/ Ratio of index of prices received for all farm products to index of prices paid for commodities & services, interest, taxes, & wage rates. Ratio uses the most recent prices paid index. Prices paid data are quarterly & will be published in January, April, July, & October. R = revised. P = preliminary. — = not available.

Information contact: Ann Duncan (202) 219-0313.

For more information, visit our website

Table 5.—Prices Received by Farmers, U.S. Average

	Annual 1/			1990				1991		
	1988	1989	1990 P	Mar	Oct	Nov	Dec	Jan	Feb R	Mar P
CROPS										
All wheat (\$/bu.)	3.72	3.72	2.80-2.85	3.48	2.42	2.39	2.40	2.42	2.43	2.52
Rice, rough (\$/cwt)	6.83	7.35	6.25-6.75	7.55	6.02	6.30	6.08	6.33	6.72	6.79
Corn (\$/bu.)	2.54	2.36	2.25-2.35	2.37	2.19	2.17	2.22	2.27	2.32	2.37
Sorghum (\$/cwt)	4.05	3.79	3.66-3.84	3.69	3.55	3.57	3.67	3.72	3.87	3.95
All hay, baled (\$/ton)	85.20	88.00	88.00	87.50	86.00	81.50	80.70	82.00	80.40	84.50
Soybeans (\$/bu.)	7.42	5.70	5.50-5.90	5.85	5.87	5.78	5.72	5.72	5.65	5.63
Cotton, upland (cts./lb.) 2/	55.6	63.2	68.10	63.9	67.5	68.2	65.9	64.2	67.9	73.0
Potatoes (\$/cwt)	6.02	7.36	6.15	9.17	4.69	5.28	5.54	5.68	5.38	5.50
Lettuce (\$/cwt) 3/	14.70	12.60	11.80	7.67	19.70	18.50	10.70	10.10	6.80	7.98
Tomatoes fresh (\$/cwt) 3/	26.90	32.90	26.40	32.30	31.30	30.40	29.80	23.10	31.60	34.00
Onions (\$/cwt)	9.75	11.60	10.30	18.40	10.50	10.70	14.40	16.60	10.70	12.00
Dry edible beans (\$/cwt)	29.90	28.50	18.80	32.40	17.80	19.10	18.80	17.30	18.20	18.60
Apples for fresh use (cts./lb.)	17.4	13.4	—	12.3	19.4	20.2	20.8	20.1	20.7	20.1
Pears for fresh use (\$/ton)	358.00	336.00	392.00	357.00	373.00	390.00	361.00	356.00	362.00	390.00
Oranges, all uses (\$/box) 4/	7.18	6.89	5.99	6.04	4.48	6.31	6.18	6.62	5.98	7.41
Grapefruit, all uses (\$/box) 4/	5.43	4.49	6.21	7.35	6.51	5.53	5.63	5.66	4.50	5.43
LIVESTOCK										
Beef cattle (\$/cwt)	66.80	69.70	74.80	74.30	75.50	75.30	76.10	76.60	77.00	78.00
Calves (\$/cwt)	89.90	91.80	96.70	98.80	92.80	93.90	96.80	98.00	104.00	106.00
Hogs (\$/cwt)	42.50	43.20	54.00	51.30	56.80	50.20	47.60	50.00	52.10	52.20
Lambs (\$/cwt)	69.50	67.30	56.00	66.00	52.00	50.10	48.60	48.00	45.60	48.60
All milk, sold to plants (\$/cwt)	12.26	13.56	13.75	13.90	13.20	12.80	11.90	11.70	11.70	11.50
Milk, manuf. grade (\$/cwt)	11.15	12.38	12.30	12.40	11.80	10.50	10.50	10.30	10.20	10.10
Broilers (cts./lb.)	34.0	36.0	32.9	36.4	29.0	28.2	28.8	30.9	29.9	30.8
Eggs (cts./doz.) 5/	53.3	70.0	70.0	79.3	73.5	72.9	76.5	78.1	67.7	80.5
Turkey (cts./lb.)	37.0	40.0	38.3	37.2	42.2	43.0	35.8	33.9	34.4	37.6
Wool (cts./lb.) 6/	138.0	124.0	78.8	83.4	83.5	68.0	48.2	38.2	42.1	47.9

1/ Season average price by crop year for crops. Calendar year average of monthly prices for livestock. 2/ Weighted average of first 7 months of the season — not a projection for 1990/91. 3/ Excludes Hawaii. 4/ Equivalent on-tree returns. 5/ Average of all eggs sold by producers including hatching eggs & eggs sold at retail. 6/ Average local market price, excluding incentive payments. R = revised. P = preliminary. — not available.

Information contact: Ann Duncan (202) 219-0313.

Producer & Consumer Prices

Table 6.—Consumer Price Index for All Urban Consumers, U.S. Average (Not Seasonally Adjusted)

	Annual	1990							1991	
	1990	Feb	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb
		1982-84=100								
Consumer Price Index, all items	130.7	128.0	130.4	131.6	132.7	133.5	133.8	133.8	134.6	134.8
Consumer Price Index, less food	130.3	127.3	130.0	131.3	132.6	133.5	133.7	133.7	134.3	134.6
All food	132.4	131.3	132.7	132.9	133.2	133.6	134.0	134.2	135.8	135.5
Food away from home	133.4	131.0	133.9	134.3	134.6	135.0	135.4	135.7	135.8	136.2
Food at home	132.3	132.1	132.5	132.7	132.9	133.4	133.8	133.8	136.4	135.7
Meats 1/	128.5	123.5	130.3	130.5	131.0	131.7	133.1	133.6	133.5	132.8
Beef & veal	128.8	126.2	129.2	128.5	129.5	130.1	131.9	133.0	132.9	132.6
Pork	129.8	119.7	134.8	136.5	135.4	136.4	137.1	136.8	136.5	135.1
Poultry	132.5	130.5	135.3	133.6	134.6	133.7	130.5	129.7	131.3	132.7
Fish	146.7	150.6	143.3	145.2	147.4	147.0	147.0	148.5	151.1	148.7
Eggs	124.1	124.7	109.1	119.6	120.6	125.5	128.5	128.7	139.8	125.4
Dairy products 2/	126.5	126.9	125.7	127.3	127.6	128.6	128.1	128.7	125.2	125.2
Fats & oils 3/	126.3	123.4	126.6	127.4	128.2	128.1	128.8	131.0	132.4	133.1
Fresh fruit	170.9	170.3	176.6	169.5	168.7	163.2	164.8	171.2	190.2	190.6
Processed fruit	136.9	131.9	140.1	140.0	139.9	139.5	137.0	134.6	134.7	133.2
Fresh vegetables	151.1	186.3	143.8	139.8	137.3	142.2	149.5	144.0	159.9	152.5
Potatoes	162.6	160.1	179.7	169.8	152.0	139.9	134.5	133.9	139.6	140.9
Processed vegetables	127.5	126.3	128.2	128.8	128.8	127.9	127.5	128.1	127.7	128.4
Cereals & bakery products	140.0	137.4	140.5	141.4	141.6	141.9	141.7	142.4	144.3	144.3
Sugar & sweets	124.7	122.9	124.9	125.6	125.8	126.6	126.1	126.4	127.3	127.1
Beverages, nonalcoholic	113.5	113.3	114.0	114.3	114.2	115.2	114.5	113.1	115.7	116.3
Apparel										
Apparel, commodities less footwear	122.8	119.0	118.8	120.5	125.8	127.4	126.4	123.8	122.0	124.8
Footwear	117.4	114.5	118.1	116.3	118.6	120.5	119.6	118.4	117.3	118.4
Tobacco & smoking products	181.5	175.0	185.7	185.8	185.8	185.9	187.2	190.5	195.8	196.7
Beverages, alcoholic	129.3	126.9	129.9	130.2	130.8	131.0	130.9	130.9	137.3	141.6

1/ Beef, veal, lamb, pork, & processed meat. 2/ Includes butter. 3/ Excludes butter.

Information contact: Ann Duncan (202) 219-0313.

Table 7.—Producer Price Indexes, U.S. Average (Not Seasonally Adjusted)

	Annual			1990					1991	
	1988	1989	1990 P	Feb	Sept	Oct R	Nov	Dec	Jan	Feb
	1982 = 100									
Finished goods 1/	108.0	113.6	119.2	117.4	120.4	122.3	122.9	121.9	121.9	121.2
Consumer foods	112.6	118.7	124.4	124.8	124.2	124.6	125.1	124.1	124.6	124.4
Fresh fruit	113.5	113.2	117.3	114.3	117.6	119.7	121.1	119.5	125.0	129.4
Fresh & dried vegetables	105.5	116.7	118.1	191.7	94.3	101.5	117.0	95.7	97.0	96.4
Dried fruit	99.1	103.0	98.5	106.4	106.3	108.0	110.4	110.5	110.3	110.3
Canned fruit & juice	120.2	122.7	126.9	126.7	128.6	127.7	125.1	125.1	126.2	127.4
Frozen fruit & juice	129.8	123.9	138.9	147.3	139.9	137.0	119.1	116.3	113.0	115.0
Fresh veg. excl. potatoes	100.4	103.9	107.8	203.2	79.4	96.2	117.7	87.2	89.3	87.3
Canned veg. & juices	108.3	118.6	116.7	117.8	115.4	114.6	114.5	114.0	114.8	114.6
Frozen vegetables	108.6	115.5	118.5	117.9	118.5	118.6	118.9	119.0	119.3	119.3
Potatoes	113.9	153.6	157.3	161.2	155.4	131.0	129.4	135.5	134.0	137.5
Eggs	88.6	119.6	117.6	114.0	112.6	121.6	125.0	124.5	140.0	110.5
Bakery products	126.4	135.4	140.9	139.8	141.9	142.4	142.4	142.6	144.4	145.2
Meats	99.9	104.8	116.9	111.1	117.2	119.7	119.6	119.6	117.5	116.8
Beef & veal	101.4	108.9	116.0	113.6	114.1	117.4	119.7	121.2	117.6	116.1
Pork	95.0	97.7	118.7	107.7	121.0	124.7	120.7	118.6	117.7	117.7
Processed poultry	111.6	120.4	113.6	111.3	116.7	110.1	108.6	106.6	108.0	106.6
Fish	148.7	142.9	148.6	148.4	140.0	146.2	157.7	160.2	166.7	166.9
Dairy products	102.2	110.6	117.2	116.9	119.0	117.4	114.9	112.2	111.5	111.4
Processed fruits & vegetables	113.8	119.9	124.8	125.7	124.9	123.6	120.7	120.2	119.8	120.2
Shortening & cooking oil	118.8	116.6	123.2	116.9	127.3	122.1	119.2	120.4	119.8	120.7
Soft drinks	114.3	177.7	122.3	123.5	121.7	122.3	122.6	123.0	124.9	126.8
Consumer finished goods less foods	103.1	108.9	115.2	112.4	117.7	120.8	121.3	119.8	119.4	118.0
Beverages, alcoholic	111.8	115.2	117.2	116.6	117.3	117.1	117.4	117.0	124.3	124.1
Apparel	111.7	114.5	117.4	116.9	118.1	118.1	117.9	117.3	117.8	118.5
Footwear	115.1	120.8	125.6	125.3	126.1	126.2	125.8	126.1	126.5	126.9
Tobacco products	171.9	194.8	221.5	212.8	225.0	224.9	230.4	236.4	237.6	237.4
Intermediate materials 2/	107.1	112.0	114.5	112.5	116.3	117.9	117.8	116.7	116.4	115.5
Materials for food manufacturing	106.0	112.7	117.9	114.9	118.8	117.3	116.0	116.4	115.4	115.5
Flour	105.7	114.6	103.6	113.1	94.8	93.9	92.0	92.6	91.3	92.6
Refined sugar 3/	108.9	118.2	122.7	123.2	123.1	123.0	123.0	122.9	122.9	122.8
Crude vegetable oils	116.6	103.1	115.7	102.8	124.1	115.2	105.0	111.2	109.4	110.0
Crude materials 4/	96.0	103.1	108.9	106.8	115.1	124.8	116.8	110.5	113.8	104.4
Foodstuffs & feedstuffs	106.1	111.2	113.2	113.9	110.8	110.5	108.6	108.5	107.4	107.5
Fruits & vegetables 5/	108.5	114.6	117.2	156.9	104.0	109.0	118.2	105.7	108.8	110.3
Grains	97.9	106.4	97.5	100.4	88.3	85.8	85.1	88.0	85.9	88.0
Livestock	103.3	106.1	115.6	113.2	113.3	116.5	113.9	114.3	112.9	113.9
Poultry, live	121.6	128.8	118.8	115.5	126.9	110.2	108.3	104.2	110.4	103.1
Fibers, plant & animal	98.4	107.8	117.8	108.7	116.6	116.4	115.0	116.9	115.2	126.3
Fluid milk	89.4	98.8	101.3	105.1	106.0	95.4	91.7	87.5	84.6	83.9
Oilseeds	134.0	123.8	111.8	104.5	120.1	119.8	111.0	115.8	109.6	111.2
Tobacco, leaf	87.2	93.8	96.0	93.7	100.9	98.3	98.9	98.9	100.2	100.2
Sugar, raw cane	111.9	115.5	119.2	117.9	119.7	119.8	119.4	117.2	114.5	111.4
All commodities	106.9	112.2	116.3	114.4	118.4	120.8	120.1	118.6	118.9	117.2
Industrial commodities	106.3	111.6	115.6	113.6	118.4	121.4	120.6	118.9	119.3	117.2
All foods 6/	111.5	117.8	123.2	123.3	122.9	123.0	123.6	122.6	122.8	122.5
Farm products & processed foods & feeds	110.0	115.4	118.6	118.4	117.9	117.9	117.4	117.0	117.0	117.1
Farm products	104.9	110.9	112.2	115.7	109.2	109.5	108.3	107.6	108.9	108.7
Processed foods & feeds 6/	112.7	117.8	121.9	120.0	122.4	122.2	121.9	121.7	122.1	122.3
Cereal & bakery products	123.0	131.1	134.1	133.8	133.7	134.2	134.0	134.3	135.4	135.9
Sugar & confectionery	114.7	120.1	123.1	121.8	123.9	123.0	125.0	124.9	126.2	127.6
Beverages	114.3	118.4	120.8	120.7	120.8	120.3	120.8	120.7	124.3	125.2

1/ Commodities ready for sale to ultimate consumer. 2/ Commodities requiring further processing to become finished goods. 3/ All types & sizes of refined sugar. 4/ Products entering market for the first time that have not been manufactured at that point. 5/ Fresh & dried. 6/ Includes all raw, intermediate, & processed foods (excludes soft drinks, alcoholic beverages, & manufactured animal feeds). P = preliminary. R = revised.

Information contact: Ann Duncan (202) 219-0313.

Farm-Retail Price Spreads

Table 8.—Farm-Retail Price Spreads

	Annual			1990					1991	
	1988	1989	1990 P	Feb	Sept	Oct	Nov	Dec	Jan	Feb
Market basket 1/										
Retail cost (1982-84=100)	116.5	124.6	133.5	133.1	134.1	134.6	135.2	135.4	137.9	137.0
Farm value (1982-84=100)	100.5	107.1	113.2	116.5	112.0	110.7	110.0	106.5	109.2	108.1
Farm-retail spread (1982-84=100)	125.1	134.1	144.4	142.0	148.0	147.5	148.7	150.9	153.4	152.6
Farm value-retail cost (%)	30.2	30.1	29.7	30.6	29.3	28.8	28.5	27.6	27.7	27.6
Meat products										
Retail cost (1982-84=100)	112.2	116.7	128.5	123.5	131.0	131.7	133.1	133.6	133.5	132.8
Farm value (1982-84=100)	99.5	103.3	116.6	111.6	114.9	119.0	116.5	114.3	114.4	115.9
Farm-retail spread (1982-84=100)	125.2	130.4	140.6	135.7	147.5	144.8	150.1	153.4	153.1	150.2
Farm value-retail cost (%)	44.9	44.8	46.0	45.8	44.4	45.7	44.3	43.3	43.4	44.2
Dairy products										
Retail cost (1982-84=100)	108.4	115.6	126.5	126.9	127.6	128.6	128.1	126.7	125.2	125.2
Farm value (1982-84=100)	90.6	99.1	101.9	108.5	105.6	99.2	95.7	88.8	86.5	86.9
Farm-retail spread (1982-84=100)	124.7	130.8	149.2	143.9	147.9	155.7	167.9	161.7	160.9	160.5
Farm value-retail cost (%)	40.1	41.1	38.6	41.0	39.7	37.0	35.9	33.6	33.1	33.3
Poultry										
Retail cost (1982-84=100)	120.7	132.7	132.5	130.5	134.6	133.7	130.5	129.7	131.3	132.7
Farm value (1982-84=100)	110.2	117.1	107.6	107.1	115.1	99.0	97.2	95.3	100.2	97.7
Farm-retail spread (1982-84=100)	132.8	150.6	161.1	157.4	157.1	173.7	168.8	169.3	167.1	173.0
Farm value-retail cost (%)	48.9	47.2	43.5	43.9	45.7	39.6	39.9	39.3	40.8	39.4
Eggs										
Retail cost (1982-84=100)	93.6	118.5	124.1	124.7	120.6	125.5	128.5	128.7	139.8	125.4
Farm value (1982-84=100)	76.7	107.5	108.0	108.4	105.9	114.3	113.8	120.8	126.5	103.3
Farm-retail spread (1982-84=100)	123.9	138.1	153.2	153.9	147.1	145.7	155.0	142.8	163.7	165.2
Farm value-retail cost (%)	52.7	58.3	55.9	55.9	56.4	58.5	56.9	60.3	58.1	52.9
Cereal & bakery products										
Retail cost (1982-84=100)	122.1	132.4	140.0	137.4	141.6	141.9	141.7	142.4	144.3	144.3
Farm value (1982-84=100)	92.7	101.7	90.5	99.5	81.5	78.7	77.8	78.6	79.2	80.3
Farm-retail spread (1982-84=100)	126.2	136.7	146.9	142.7	150.0	150.7	150.6	151.3	163.4	153.2
Farm value-retail cost (%)	9.3	9.4	7.9	8.9	7.0	8.8	6.7	6.8	6.7	6.8
Fresh fruits										
Retail cost (1982-84=100)	145.4	154.7	174.6	172.5	171.9	167.2	169.3	176.6	198.3	196.5
Farm value (1982-84=100)	116.5	108.5	128.2	127.2	126.7	128.1	150.8	132.4	205.5	198.7
Farm-retail spread (1982-84=100)	158.7	176.0	195.9	193.4	192.7	185.2	177.9	197.0	195.0	195.5
Farm value-retail cost (%)	25.3	22.2	23.2	23.3	23.3	24.2	28.1	23.7	32.7	31.9
Fresh vegetables										
Retail cost (1982-84=100)	129.3	143.1	151.1	186.3	137.3	142.2	149.5	144.0	159.9	152.5
Farm value (1982-84=100)	105.8	123.3	124.2	187.2	98.8	100.2	108.2	105.3	112.9	106.7
Farm-retail spread (1982-84=100)	141.3	153.2	165.0	185.8	157.1	163.8	170.7	163.9	184.1	178.0
Farm value-retail cost (%)	27.8	29.3	27.9	34.1	24.4	23.9	24.6	24.8	24.0	23.8
Processed fruits & vegetables										
Retail cost (1982-84=100)	117.6	125.0	132.7	129.4	135.0	134.3	132.8	131.6	131.5	131.0
Farm value (1982-84=100)	136.6	133.6	147.2	143.3	151.0	149.7	147.6	140.3	120.1	120.7
Farm-retail spread (1982-84=100)	111.7	122.3	128.1	125.1	130.0	129.5	128.1	128.9	135.1	134.2
Farm value-retail cost (%)	27.6	25.4	26.4	26.3	26.6	26.5	26.5	25.3	21.7	21.9
Fats & oils										
Retail cost (1982-84=100)	113.1	121.2	126.3	123.4	128.2	128.1	128.8	131.0	132.4	133.1
Farm value (1982-84=100)	103.0	95.6	106.2	98.4	109.8	105.9	100.4	102.5	103.8	103.3
Farm-retail spread (1982-84=100)	116.8	130.6	133.7	133.3	135.0	136.3	139.2	141.5	142.9	144.1
Farm value-retail cost (%)	24.5	21.2	22.6	21.0	23.0	22.2	21.0	21.0	21.1	20.9
	Annual			1990					1991	
	1988	1989	1990 P	Feb	Sept	Oct	Nov	Dec	Jan	Feb
Beef, Choice										
Retail price 2/ (cts./lb.)	250.3	265.7	281.0	271.0	280.6	282.7	291.6	295.3	294.9	292.5
Wholesale value 3/ (cts.)	169.4	178.8	189.6	188.0	188.6	192.2	197.6	199.4	192.6	189.6
Net farm value 4/ (cts.)	148.3	157.6	168.4	167.2	166.7	171.0	174.7	174.7	170.2	171.1
Farm-retail spread (cts.)	102.0	108.1	112.6	103.8	113.9	111.7	116.9	120.6	124.7	121.4
Wholesale-retail 5/ (cts.)	80.9	88.9	91.4	85.0	94.0	90.5	94.0	95.9	102.3	102.9
Farm-wholesale 6/ (cts.)	21.1	19.2	21.2	18.8	19.9	21.2	22.9	24.7	22.4	18.5
Farm value-retail price (%)	59	59	60	62	59	60	60	59	58	58
Pork										
Retail price 2/ (cets./lb.)	183.4	182.9	212.6	196.5	220.8	223.2	222.9	223.2	216.1	215.5
Wholesale value 3/ (cts.)	101.0	99.2	118.3	105.6	120.7	124.4	119.7	117.5	109.7	110.1
Net farm value 4/ (cts.)	99.4	70.4	87.2	78.4	88.0	91.2	79.1	77.3	81.4	83.1
Farm-retail spread (cts.)	114.0	112.5	125.4	118.1	132.8	132.0	143.8	145.9	134.7	132.4
Wholesale-retail 5/ (cts.)	82.4	83.7	94.3	90.9	100.1	98.8	103.2	105.7	106.4	105.4
Farm-wholesale 6/ (cts.)	31.6	28.8	31.1	27.2	32.7	33.2	40.6	40.2	28.3	27.0
Farm value-retail price (%)	38	38	41	40	40	41	35	35	38	39

1/ Retail costs are based on CPI-U of retail prices for domestically produced farm foods, published monthly by BLS. The farm value is the payment for the quantity of farm equivalent to the retail unit, less allowance for byproduct. Farm values are based on prices at first point of sale & may include marketing charges such as grading & packing for some commodities. The farm-retail spread, the difference between the retail price & the farm value, represents charges for assembling, processing, transporting, distributing. 2/ Weighted average price of retail cuts from pork & choice yield grade 3 beef. Prices from BLS. 3/ Value of wholesale (boxed beef) & wholesale cuts (pork) equivalent to 1 lb. of retail cuts adjusted for transportation costs & byproduct values. 4/ Market value to producer for live animal equivalent to 1 lb. of retail cuts, minus value of byproducts. 5/ Charges for retailing & other marketing services such as wholesaling, and in-city transportation. 6/ Charges for livestock marketing, processing, & transportation.

Information contacts: Denis Dunham (202) 219-0870, Larry Duewer (202) 219-0712.

Table 11.—U.S. Egg Supply & Use

	Beg. stocks	Pro- duc- tion	Im- ports	Total supply	Ex- ports	Hatch- ing use	Ending stocks	Consumption		
								Total	Per capita	Wholesale price*
									No.	
Million dozen										
1986	10.7	5,766.3	13.7	5,790.7	101.6	566.8	10.4	5,111.9	254.9	71.1
1987	10.4	5,868.2	5.6	5,884.2	111.2	599.1	14.4	5,159.5	254.9	61.6
1988	14.4	5,784.2	5.3	5,803.9	141.8	605.9	15.2	5,041.0	248.8	62.1
1989	15.2	5,597.8	25.2	5,638.2	91.6	642.9	10.7	4,893.0	237.3	81.9
1990	10.7	5,659.9	9.1	5,679.6	100.5	675.8	11.6	4,891.7	234.8	82.2
1991 F	11.6	5,720.0	5.0	5,736.6	108.0	720.0	12.0	4,896.6	232.8	74-80

* Cartoned grade A large eggs, New York. F = forecast.

Information contact: Maxine Davis (202) 219-0767.

Table 12.—U.S. Milk Supply & Use¹

	Pro-duction	Farm use	Commercial		Im-ports	Total commercial supply	CCC net re-movals	Commercial		All milk price 2/
			Farm market-ings	Beg. stock				Ending stocks	Disap-pear-ance	
Billion pounds										
1984	135.4	2.9	132.4	5.2	2.7	140.4	8.6	4.9	128.8	13.46
1985	143.0	2.5	140.6	4.9	2.8	148.3	13.2	4.6	130.5	12.75
1986	143.1	2.4	140.7	4.8	2.7	148.1	10.6	4.2	133.3	12.51
1987	142.7	2.3	140.5	4.2	2.5	147.1	8.7	4.6	135.8	12.54
1988	145.2	2.2	142.9	4.8	2.4	149.9	9.4	4.3	136.6	12.24
1989	144.2	2.1	142.2	4.3	2.5	148.9	9.4	4.1	135.4	13.54
1990	148.3	2.1	146.2	4.1	2.7	153.0	9.0	5.1	138.9	13.75
1991 F	150.2	2.1	148.1	5.1	2.8	155.7	10.0	4.4	141.4	11.45

^{1/} Milkfat basis. Totals may not add because of rounding. ^{2/} Delivered to plants & dealers; does not reflect deductions. F = forecast.

Information contact: Jim Miller (202) 219-0770.

Table 13.—Poultry & Eggs

	Annual			1990					1991	
	1988	1989	1990	Feb	Sept	Oct	Nov	Dec	Jan	Feb
Broilers										
Federally inspected slaughter, certified (mil. lb.)	16,124.4	17,334.2	18,549.9	1,367.7	1,421.4	1,768.6	1,564.3	1,435.0	1,687.6	1,470.6
Wholesale price, 12-city (cts./lb.)	56.3	59.0	54.8	57.4	57.4	48.8	48.0	49.6	51.7	50.6
Price of grower feed (\$/ton)	219	237	218.3	223	220	207	209	213	213	214
Broiler-feed price ratio 1/	3.1	3.0	3.0	3.0	3.2	2.8	2.7	2.7	2.9	2.8
Stocks beginning of period (mil. lb.)	24.8	35.9	38.3	28.2	25.9	23.9	26.9	27.7	26.1	22.7
Broiler-type chicks hatched (mil.) 2/	5,602.4	5,948.9	6,314.6	473.3	510.0	510.8	490.5	547.5	543.9	497.1
Turkeys										
Federally inspected slaughter, certified (mil. lb.)	3,923.4	4,174.8	4,560.6	297.8	382.9	478.4	445.8	328.6	388.7	320.9
Wholesale price, Eastern U.S., 8-16 lb. young hens (cts./lb.)	61.2	66.7	63.2	55.2	69.0	76.2	73.7	56.1	53.5	55.8
Price of turkey grower feed (\$/ton)	243	251	238.4	241	239	234	239	237	234	237
Turkey-feed price ratio 1/	3.0	3.2	3.2	2.8	3.4	3.6	3.6	3.0	2.9	2.9
Stocks beginning of period (mil. lb.)	266.2	249.7	235.9	266.4	593.1	623.6	625.1	338.4	306.4	301.1
Poultis placed in U.S. (mil.)	261.4	290.7	304.9	24.6	19.7	21.5	21.9	22.8	25.9	25.3
Eggs										
Farm production (mil.)	69,410	67,174	67,910	5,165	5,534	5,785	5,689	5,864	5,837	5,284
Average number of layers (mil.)	277	269	270	272	268	270	271	272	273	274
Rate of lay (eggs per layer on farms)	251	250	251.7	19.0	20.7	21.5	21.0	21.5	21.3	19.3
Cartoned price, New York, grade A large (cts./doz.) 3/	62.1	61.9	62.2	79.8	82.2	86.5	85.5	92.5	87.5	78.3
Price of laying feed (\$/ton)	203	209	202	198	204	199	200	199	198	199
Egg-feed price ratio 1/	5.3	6.7	6.9	7.1	6.7	7.4	7.3	7.7	8.0	6.8
Stocks, first of month										
Shell (mil. doz.)	1.29	0.27	0.36	0.66	0.57	0.54	0.33	0.48	0.45	0.51
Frozen (mil. doz.)	13.1	14.9	10.3	10.8	13.0	12.6	12.8	13.0	11.2	11.2
Replacement chicks hatched (mil.)	366	383	399.0	32.1	31.2	31.9	30.0	31.3	33.1	34.8

1/ Pounds of feed equal in value to 1 dozen eggs or 1 lb. of broiler or turkey liveweight. 2/ Placement of broiler chicks is currently reported for 15 States only; henceforth, hatch of broiler-type chicks will be used as a substitute. 3/ Price of cartoned eggs to volume buyers for delivery to retailers.

Information contact: Maxine Davis (202) 219-0767.

Table 14.—Dairy

	Annual			1990					1991	
	1988	1989	1990	Feb	Sept	Oct	Nov	Dec	Jan	Feb
Milk prices, Minnesota-Wisconsin, 3.5% fat (\$/cwt) 1/	11.03	12.37	12.21	12.21	12.50	10.48	10.25	10.19	10.16	10.04
Wholesale prices										
Butter, grade A Chl. (cts./lb.)	132.5	127.9	102.1	108.2	98.9	98.9	98.9	98.0	97.2	97.2
Am. cheese, Wis. assembly pt. (cts./lb.)	123.8	138.8	138.7	131.8	142.8	121.2	112.0	112.7	111.4	111.5
Nonfat dry milk (cts./lb.) 2/	80.2	105.5	100.8	82.3	92.0	88.6	86.8	88.2	85.2	85.1
USDA net removals										
Total milk equiv. (mil. lb.) 3/	9,070.1	9,357.0	8,951.2	1,305.7	125.7	263.0	285.6	831.9	1,843.5	1,659.8
Butter (mil. lb.)	312.8	341.4	400.3	59.9	6.6	11.8	10.8	30.6	77.5	68.1
Am. cheese (mil. lb.)	238.1	37.4	21.6	0	0	0	4.6	17.0	15.6	18.0
Nonfat dry milk (mil. lb.)	267.6	0	117.8	-0.7	15.9	22.6	34.1	42.8	55.4	44.2
Milk										
Milk prod. 21 States (mil. lb.)	123,518	122,509	125,714	9,722	9,973	10,223	9,998	10,467	10,662	9,982
Milk per cow (lb.)	14,291	14,369	14,768	1,141	1,171	1,200	1,171	1,225	1,253	1,174
Number of milk cows (1,000)	8,643	8,526	8,613	8,523	8,516	8,516	8,540	8,547	8,510	8,488
U.S. milk production (mil. lb.)	145,152	144,239	148,284	6/ 11,486	6/ 11,732	6/ 12,088	6/ 11,821	6/ 12,377	6/ 12,597	6/ 11,770
Stock, beginning										
Total (mil. lb.)	7,473	8,379	9,038	9,552	13,950	13,418	13,258	13,028	13,359	14,729
Commercial (mil. lb.)	4,596	4,258	4,120	4,390	5,507	5,204	5,082	5,033	5,148	5,805
Government (mil. lb.)	2,877	4,122	4,918	5,162	8,443	8,215	8,176	7,993	8,213	8,925
Imports, total (mil. lb.) 3/	2,394	2,499	2,690	194	222	248	262	208	184	—
Commercial disappearance (mil. lb.)	138,674	135,418	138,934	9,882	11,961	12,020	11,677	11,485	10,084	—
Butter										
Production (mil. lb.)	1,207.5	1,273.5	1,286.7	115.7	84.8	105.0	111.0	116.5	142.1	120.3
Stocks, beginning (mil. lb.)	143.2	214.7	258.2	289.7	427.9	412.3	413.6	407.8	416.1	470.8
Commercial disappearance (mil. lb.)	909.8	854.1	898.8	54.9	86.3	92.4	97.9	85.5	37.8	—
American cheese										
Production (mil. lb.)	2,756.6	2,672.6	2,891.3	227.3	220.5	238.9	235.9	251.6	247.1	222.4
Stocks, beginning (mil. lb.)	370.4	293.0	238.2	260.2	381.0	350.7	338.7	334.6	347.4	381.5
Commercial disappearance (mil. lb.)	2,570.9	2,681.6	2,781.6	215.2	231.3	248.6	238.0	229.1	230.6	—
Other cheese										
Production (mil. lb.)	2,815.4	2,941.3	3,146.7	232.1	256.2	266.8	253.5	264.3	254.6	235.6
Stocks, beginning (mil. lb.)	89.7	104.7	93.2	99.4	117.0	111.1	107.1	102.9	110.8	113.0
Commercial disappearance (mil. lb.)	3,034.5	3,208.9	3,406.2	245.2	285.0	298.0	286.4	279.0	268.0	—
Nonfat dry milk										
Production (mil. lb.)	979.7	874.7	869.9	71.2	50.8	55.2	71.1	79.0	82.6	77.9
Stocks, beginning (mil. lb.)	177.2	53.1	49.5	49.4	123.8	121.2	129.2	143.8	161.9	196.9
Commercial disappearance (mil. lb.)	734.3	873.0	688.3	64.3	42.2	32.9	37.3	36.5	27.3	—
Frozen dessert										
Production (mil. gal.) 4/	1,248.0	1,214.0	1,187.2	85.4	94.0	91.3	78.3	74.1	78.9	82.3
	Annual			1990					1991	
	1988	1989	1990	II	III	IV	I	II	III	IV P
Milk production (mil. lb.)	145,152	144,239	148,284	37,702	35,157	34,939	36,740	38,026	38,632	36,286
Milk per cow (lb.)	14,145	14,244	14,642	3,727	3,481	3,451	3,627	3,820	3,820	3,575
No. of milk cows (1,000)	10,282	10,126	10,127	10,115	10,099	10,126	10,128	10,111	10,119	10,151
Milk-feed price ratio 5/	1.58	1.65	1.72	1.48	1.83	1.92	1.83	1.69	1.76	1.59
Returns over concentrate 5/ costs (\$/cwt milk)	9.05	10.08	10.40	8.86	9.92	12.16	11.30	10.27	10.90	9.30

1/ Manufacturing grade milk. 2/ Prices paid f.o.b. Central States production area. 3/ Milk equivalent, fat basis. 4/ Hard ice cream, ice milk, & hard sherbet. 5/ Based on average milk price after adjustment for price support deductions. 6/ Estimated. P = preliminary. — = not available.

Information contact: LaVerne T. Williams (202) 219-0770.

Table 15.—Wool

	Annual			1990					1991	
	1988	1989	1990	IV	I	II	III	IV	I	
U.S. wool price, (cts./lb.) 1/	438	370	256	328	289	272	238	227	197	
Imported wool price, (cts./lb.) 2/	372	354	287	316	327	312	281	270	235	
U.S. mill consumption, scoured 3/										
Apparel wool (1,000 lb.)	117,069	112,998	114,100	24,921	29,948	29,998	25,631	28,523	—	
Carpet wool (1,000 lb.)	15,833	14,122	13,470	2,984	3,779	2,923	3,771	2,977	—	

1/ Wool price delivered at U.S. mills, clean basis, Graded Territory 64's (20.60-22.04 microns) staple 2-3/4" & up. 2/ Wool price, Charleston, SC warehouse, clean basis, Australian 60/62's, type 64A (24 micron). Duty since 1982 has been 10.0 cents. 3/ Beginning 1990 mill consumption reported only on a quarterly basis. — = not available.

Information contact: John Lawler (202) 219-0840.

Table 16.—Meat Animals

	Annual			1990					1991	
	1988	1989	1990	Feb	Sept	Oct	Nov	Dec	Jan	Feb
Cattle on feed (7 States)										
Number on feed (1,000 head) 1/	8,411	8,045	8,378	8,528	8,990	7,670	8,728	9,129	9,137	9,103
Placed on feed (1,000 head)	20,854	20,834	21,215	1,388	2,204	2,751	2,007	1,478	1,791	1,465
Marketings (1,000 head)	19,918	19,422	19,238	1,600	1,445	1,805	1,812	1,349	1,707	1,481
Other disappearance (1,000 head)	1,202	1,079	1,218	95	79	87	95	121	118	113
Beef steer—corn price ratio,										
Omaha 2/	31.5	30.3	32.8	34.9	34.5	36.5	37.3	36.5	35.3	34.3
Hog—corn price ratio, Omaha 2/	19.6	18.4	23.1	22.9	25.1	27.0	23.2	22.0	23.0	22.6
Market prices (\$/cwt)										
Slaughter cattle										
Choice steers, Omaha 1,000–1,100 lb.	69.54	72.52	77.40	76.61	75.75	77.50	79.93	80.88	78.95	78.63
Choice steers, Neb. Direct, 1,100–1,300 lb.	71.19	73.88	78.56	78.22	77.60	79.33	81.06	81.42	79.35	79.60
Boning utility cows, Sioux Falls	47.21	48.98	53.60	53.81	55.41	50.58	48.75	50.35	49.41	51.49
Feeder cattle										
Medium no. 1, Oklahoma City 600–700 lb.	84.72	86.06	92.18	85.35	94.41	92.14	93.58	95.87	94.21	95.53
Slaughter hogs										
Barrows & gilts, 7—markets	43.39	44.03	54.45	48.51	55.10	57.15	49.70	48.15	51.00	51.93
Feeder pigs										
8. Mo. 40–50 lb. (per head)	35.06	33.63	51.48	54.41	45.91	52.33	48.22	49.63	48.50	57.47
Slaughter sheep & lambs										
Lambs, Choice, San Angelo	68.26	67.32	55.54	60.38	51.75	52.50	50.42	48.05	47.63	45.80
Ewes, Good, San Angelo	38.88	38.58	35.21	38.47	32.88	32.00	33.83	34.67	31.94	30.38
Feeder lambs										
Choice, San Angelo	90.89	79.85	62.95	74.88	55.75	55.90	57.83	59.17	50.63	51.25
Wholesale meat prices, Midwest										
Boxed beef cut-out value*	110.50	114.78	123.21	120.97	121.18	124.06	128.32	129.48	125.04	123.24
Canner & cutter cow beef	87.77	94.43	99.96	100.95	101.93	96.01	91.11	97.32	95.87	100.50
Pork loins, 14–18 lb. 3/	97.49	101.09	117.52	107.75	121.64	113.71	98.94	103.50	107.53	109.13
Pork bellies, 12–14 lb.	41.25	34.14	53.80	42.53	51.31	59.83	60.57	56.58	64.11	57.20
Hams, skinned, 14–17 lb.	71.03	69.39	87.70	78.50	101.75	107.24	108.00	88.13	73.00	83.17
All fresh beef retail price 4/	224.81	238.97	254.99	249.14	256.39	259.36	283.40	265.75	261.30	261.57
Commercial slaughter (1,000 head)**										
Cattle	35,079	33,917	33,242	2,501	2,618	2,963	2,701	2,453	2,881	2,499
Steers	17,346	16,539	16,587	1,240	1,276	1,401	1,302	1,227	1,418	1,220
Helfers	10,753	10,406	10,090	769	842	920	787	695	858	741
Cows	8,338	6,316	5,920	446	444	581	559	486	557	481
Bulls & stage	644	657	644	46	54	61	53	45	50	47
Calves	2,506	2,172	1,789	148	136	163	153	140	164	125
Sheep & lambs	5,293	5,465	5,654	441	440	505	481	465	508	481
Hogs	87,795	88,091	85,135	6,810	6,899	7,758	7,532	7,355	7,652	6,837
Commercial production (mil. lb.)										
Beef	23,424	22,974	22,534	1,706	1,815	2,044	1,842	1,681	1,968	1,994
Veal	387	344	316	24	26	31	28	27	31	28
Lamb & mutton	329	341	357	29	27	32	30	30	33	30
Pork	15,823	15,759	15,299	1,213	1,228	1,392	1,373	1,342	1,399	2,954
	Annual			1990					1991	
	1988	1989	1990	IV	I	II	III	IV	I	II
Cattle on feed (13 States)										
Number on feed (1,000 head) 1/	10,114	9,688	9,943	8,276	9,943	10,063	8,761	9,092	10,977	10,899
Placed on feed (1,000 head)	24,423	24,498	24,948	7,306	6,083	5,086	6,333	7,486	5,892	—
Marketings (1,000 head)	23,459	22,940	22,561	6,348	5,678	5,988	6,741	6,254	5,538 6/	6,375
Other disappearance (1,000 head)	1,390	1,274	1,393	293	385	400	261	347	462	—
Hogs & pigs (10 States) 5/										
Inventory (1,000 head) 1/	42,875	43,210	42,200	45,050	42,200	40,190	42,630	44,120	42,800	41,590
Breeding (1,000 head) 1/	5,435	5,335	5,275	5,320	5,275	5,245	5,405	5,300	5,242	5,340
Market (1,000 head) 1/	37,240	37,875	36,925	39,730	36,925	34,945	37,225	38,820	37,558	36,250
Farrowings (1,000 head)	9,370	9,203	8,955	2,195	2,028	2,458	2,236	2,233	2,089 6/	2,500
Pig crop (1,000 head)	72,268	71,807	70,549	18,929	15,870	19,578	17,684	17,419	18,455	—

1/ Beginning of period. 2/ Bushels of corn equal in value to 100 pounds live weight. 3/ Prior to 1984, 8–14 lb.; 1984 & 1985, 14–17 lb.; beginning 1986, 14–18 lb. 4/ New series estimating the composite price of all beef grades & ground beef sold by retail stores. This new series is in addition to, but does not replace, the series for the retail price of Choice beef that appears in table 8. 5/ Quarters are Dec. of preceding year—Feb. (I), Mar.–May (II), June–Aug. (III), & Sept.–Nov. (IV). 6/ Intentions.

**Classes estimated. May not add to NASS totals due to rounding. NQ = not quote. — = not available.

Note: * This series replaces the Choice steer beef price, 600–700 lb., which was discontinued with the June number. The new number is the value of Choice beef from a yield grade 1–3, 550–700 lb. carcass.

Information contact: Polly Cochran (202) 219-0767.

Crops & Products

Table 17.—Supply & Utilization^{1,2}

	Area			Yield	Production	Total supply ^{4/}	Feed and residual	Other domestic uses	Exports	Total use	Ending stocks	Farm price ^{5/}
	Set aside ^{3/}	Planted	Harvested									
	Mil. acres		Bu./acre									
Wheat												
1985/86	18.8	75.0	64.7	37.5	2,424	3,885	284	797	909	1,980	1,905	3.08
1986/87	21.0	72.1	60.7	34.4	2,091	4,017	401	796	999	2,198	1,821	2.42
1987/88	23.9	65.8	56.0	37.7	2,108	3,845	280	808	1,698	2,684	1,261	2.57
1988/89*	22.5	65.5	53.2	34.1	1,812	3,090	157	818	1,419	2,394	702	3.72
1989/90*	9.6	76.0	62.1	32.7	2,037	2,762	180	832	1,233	2,225	536	3.72
1990/91*	7.1	77.3	69.4	39.5	2,739	3,310	500	864	1,050	2,414	898	2.60-2.65
Rice												
1985/86	1.24	2.51	2.49	5,414	134.9	201.8	—	8/ 85.8	58.7	124.5	77.3	6.53
1986/87	1.48	2.38	2.36	5,651	133.4	213.3	—	8/ 77.7	84.2	161.9	51.4	3.75
1987/88	1.87	2.36	2.33	5,655	129.6	184.0	—	8/ 80.4	72.2	152.8	31.4	7.27
1988/89*	1.09	2.93	2.90	5,514	159.9	195.0	—	8/ 82.3	85.9	188.2	28.7	6.83
1989/90*	1.21	2.73	2.69	5,749	154.5	185.4	—	8/ 82.4	76.6	159.2	26.3	7.35
1990/91*	1.03	2.89	2.81	5,507	154.9	188.0	—	8/ 88.8	73.0	161.8	24.2	6.25-6.75
Corn												
1985/86	5.4	83.4	75.2	118.0	8,876	10,534	4,107	1,180	1,227	6,494	4,040	2.23
1986/87	14.3	78.7	68.9	119.4	8,228	12,267	4,701	1,192	1,492	7,326	4,882	1.50
1987/88	23.1	65.2	58.5	119.8	7,131	12,010	4,812	1,229	1,718	7,767	4,259	1.94
1988/89*	20.5	67.7	58.3	84.8	4,929	9,191	3,987	1,245	2,028	7,260	1,930	2.54
1989/90*	10.8	72.3	64.8	118.2	7,525	9,458	4,456	1,290	2,367	8,113	1,344	2.36
1990/91*	10.1	74.2	67.0	118.5	7,933	9,280	4,850	1,320	1,750	7,920	1,380	2.25-2.35
Sorghum												
1985/86	0.9	18.3	16.8	66.8	1,120	1,420	664	28	178	869	551	1.93
1986/87	3.0	15.3	13.9	67.7	938	1,469	535	12	198	748	743	1.37
1987/88	4.1	11.8	10.8	69.4	731	1,474	555	25	231	811	683	1.70
1988/89*	3.9	10.3	9.0	63.8	577	1,239	488	22	310	800	440	2.27
1989/90*	3.3	12.6	11.2	55.4	615	1,055	517	15	304	835	220	2.10
1990/91*	3.0	10.7	9.1	62.9	571	791	450	15	290	663	128	2.05-2.15
Barley												
1985/86	0.7	13.2	11.8	61.0	591	848	333	169	22	523	325	1.98
1986/87	2.1	13.1	12.0	50.8	511	844	298	174	137	608	336	1.81
1987/88	2.9	11.0	9.9	52.4	521	869	254	174	120	548	321	1.81
1988/89*	2.8	9.6	7.9	36.0	290	622	166	180	79	425	196	2.80
1989/90*	2.3	9.2	8.3	48.6	404	614	190	179	84	453	161	2.42
1990/91*	2.6	8.3	7.5	55.9	419	587	200	178	85	463	124	2.10-2.15
Oats												
1985/86	0.1	13.3	8.2	63.7	521	728	480	82	2	544	184	1.23
1986/87	0.6	14.7	9.9	56.3	386	803	395	73	3	471	133	1.21
1987/88	0.8	18.0	9.9	64.0	374	552	358	81	1	440	112	1.68
1988/89*	0.3	13.9	5.5	39.3	218	393	194	100	1	294	98	2.61
1989/90*	0.4	12.1	6.9	64.3	374	538	265	115	1	380	157	1.49
1990/91*	0.2	10.4	5.9	60.1	357	579	300	120	1	420	189	1.10-1.15
Soybean^{6/}												
1985/86	0	63.1	61.0	34.1	2,099	2,418	0	1,053	740	1,879	536	5.05
1986/87	0	60.4	58.3	33.3	1,940	2,476	0	1,179	757	2,040	436	4.78
1987/88	0	58.2	57.2	33.9	1,938	2,374	0	1,174	802	2,072	302	6.88
1988/89*	0	58.5	57.4	27.0	1,549	1,855	0	1,058	627	1,673	182	7.42
1989/90*	0	60.8	59.5	32.3	1,924	2,109	0	1,146	823	1,870	239	5.70
1990/91*	0	57.8	56.5	34.0	1,922	2,163	0	1,165	540	1,803	360	5.50-5.90
Soybean oil												
1985/86	—	—	—	—	11,617	12,257	—	10,053	1,257	11,310	947	18.00
1986/87	—	—	—	—	12,783	13,745	—	10,833	1,187	12,020	1,725	15.40
1987/88	—	—	—	—	12,974	14,895	—	10,930	1,873	12,803	2,092	22.85
1988/89*	—	—	—	—	11,737	13,967	—	10,591	1,661	12,252	1,716	21.10
1989/90*	—	—	—	—	13,004	14,741	—	12,083	1,353	13,436	1,305	22.30
1990/91*	—	—	—	—	13,025	14,350	—	12,100	795	12,875	1,475	21.0-22.5
Soybean meal												
1985/86	—	—	—	—	24,951	25,338	—	18,090	6,036	25,126	212	165
1986/87	—	—	—	—	27,758	27,970	—	20,367	7,343	27,730	240	163
1987/88	—	—	—	—	26,060	28,300	—	21,293	6,554	28,147	153	222
1988/89*	—	—	—	—	24,943	25,100	—	19,839	5,258	24,927	173	233
1989/90*	—	—	—	—	27,719	27,900	—	22,558	5,024	27,582	318	174
1990/91*	—	—	—	—	27,622	27,950	—	22,600	5,000	27,600	350	155-170

See footnotes at end of table.

Table 17.—Supply & Utilization, continued

	Area			Yield	Production	Total supply 4/	Feed and residual	Other domestic use	Exports	Total use	Ending Stocks	Farm price 5/
	Set Aside 3/	Planted	Harvested									
	Mill. acres			Lb./acre		Mill. bales						
Cotton 10/												
1985/86	3.6	10.7	10.2	630	13.4	17.6	—	5.4	2.0	8.4	9.4	56.50
1986/87	4.2	10.0	8.5	552	9.7	19.1	—	7.4	5.7	14.1	6.0	52.40
1987/88	3.9	10.4	10.0	706	14.8	19.8	—	7.6	6.6	14.2	5.8	64.30
1988/89*	2.2	12.5	12.0	619	15.4	21.2	—	7.8	6.2	13.9	7.1	56.00
1989/90*	3.6	10.6	9.5	614	12.2	19.3	—	8.6	7.7	16.4	3.0	66.20
1990/91*	1.9	12.4	11.7	640	15.6	18.5	—	8.4	7.9	16.3	2.3 11/	68.10

* April 10, 1991 Supply & Demand Estimates. 1/ Marketing year beginning June 1 for wheat, barley, & oats, August 1 for cotton & rice, September 1 for soybeans, corn, & sorghum, October 1 for soybean meal & soybean oil. 2/ Conversion factors: Hectare (ha.) = 2.471 acres, 1 metric ton = 2,204.622 pounds, 36.7437 bushels of wheat or soybeans, 39.3679 bushels of corn or sorghum, 48.9296 bushels of barley, 68.8944 bushels of oats, 22.048 cwt of rice, & 4.59 480-pound bales of cotton. 3/ Includes diversion, PIK, acreage reduction, 50-52, & 0-52 programs. 4/ Includes imports. 5/ Market average prices do not include an allowance for loans outstanding & Government purchases. 6/ Residual included in domestic use. 7/ Average of crude soybean oil, Decatur. 8/ Includes 196 million pounds in imports for 1987/88, 138 million in 1988/89, 15 million in 1989/90, & 50 million in 1990/91. 9/ Average of 44 percent, Decatur. 10/ Upland & extra long staple. Stocks estimates based on Census Bureau data, resulting in an unaccounted difference between supply & use estimates & changes in ending stocks. 11/ 1990/91 values are weighted averages for the first 5 months of the marketing season; not a projection for 1990/91. — = not available or not applicable.

Information contact: Commodity Economics Division, Crops Branch (202) 219-0840.

Table 18.—Food Grains

	Marketing year 1/				1990				1991	
	1986/87	1987/88	1988/89	1989/90	Feb	Oct	Nov	Dec	Jan	Feb
Wholesale prices										
Wheat, No. 1 HRW,										
Kansas City (\$/bu.) 2/	2.72	2.96	4.17	4.22	4.14	2.81	2.78	2.76	2.71	2.77
Wheat, DNS,										
Minneapolis (\$/bu.) 3/	3.07	3.15	4.36	4.16	4.06	2.85	2.80	2.82	2.83	2.85
Rice, S.W. La. (\$/cwt) 4/	10.25	19.25	14.85	15.55	15.65	13.75	14.00	14.00	14.15	15.45
Wheat										
Exports (mil. bu.)	1,004	1,592	1,424	1,233	83	88	81	61	69	—
Mill grind (mil. bu.)	755	753	778	759	—	75	73	64	67	—
Wheat flour production (mil. cwt)	335	336	348	347	—	33	33	29	30	—
Rice										
Exports (mil. cwt, rough equiv.)	84.2	72.2	85.9	76.8	5.8	9.0	8.4	9.4	5.4	—
	Marketing year 1/				1989				1990	
	1987/88	1988/89	1989/90	June-Aug	Sept-Nov	Dec-Feb	Mar-May	June-Aug	Sept-Nov	Dec-Feb
Wheat										
Stocks, beginning (mil. bu.)	1,821	1,261	702	701.6	1,917.2	1,423.7	943.1	536.5	2,409.5	1,908.0
Domestic use										
Food (mil. bu.)	721	715	731	183.1	183.1	180.6	184.3	197.4	211.9	188.0
Seed, feed & residual (mil. bu.) 5/	365	260	261	273.9	—12.8	44.9	—44.9	408.0	24.9	106.4
Exports (mil. bu.)	1,698	1,419	1,233	389.9	326.6	259.7	274.8	268.1	278.0	225.0

1/ Beginning June 1 for wheat & August 1 for rice. 2/ Ordinary protein. 3/ 14% protein. 4/ Long grain, milled basis. 5/ Residual includes feed use. — = not available.

Information contacts: Ed Allen & Janet Livezey (202) 219-0840.

Table 19.—Cotton

	Marketing year 1/				1990				1991	
	1986/87	1987/88	1988/89	1989/90	Feb	Oct	Nov	Dec	Jan	Feb
U.S. price, SLM,										
1-1/16 in. (cts./lb.) 2/	53.2	63.1	57.7	69.8	65.0	70.5	69.5	69.9	70.5	77.7
Northern Europe prices										
Index (cts./lb.) 3/	62.0	72.7	66.4	82.3	78.9	81.5	82.7	83.6	83.4	85.2
U.S. M 1-3/32 in. (cts./lb.) 4/	61.8	76.3	69.2	83.6	77.0	82.4	83.2	84.0	85.5	93.8
U.S. mill consumpt. (1,000 bales)	7,452	7,617	7,782	8,759	579	802	687	490	—	—
Exports (1,000 bales)	6,684	6,582	6,148	7,894	797	377	718	769	994	—
Stocks, beginning (1,000 bales)	9,348	5,026	5,771	7,092	11,114	3,207	7,498	10,680	11,555	—

1/ Beginning August 1. 2/ Average spot market. 3/ Liverpool Cotton (A) Index; average of five lowest prices of 11 selected growths. 4/ Memphis territory growths. — = not available.

Information contact: Bob Skinner (202) 219-0840.

Table 20.—Feed Grains

	Marketing year 1/				1990				1991	
	1986/87	1987/88	1988/89	1989/90	Feb	Oct	Nov	Dec	Jan	Feb
Wholesale prices										
Corn, no. 2 yellow, 30 day, Chicago (\$/bu.)	1.64	2.14	2.68	2.53	2.37	2.24	2.33	2.33	2.39	2.43
Sorghum, no. 2 yellow, Kansas City (\$/cwt)	2.73	3.40	4.16	4.18	3.84	3.79	3.85	3.97	4.12	4.21
Barley, feed, Duluth (\$/bu.) 2/	1.44	1.78	2.31	2.20	2.20	2.11	2.16	2.07	2.09	2.15
Barley, malting, Minneapolis (\$/bu.)	1.89	2.04	4.11	3.20	3.02	2.30	2.40	2.31	2.33	2.38
Exports 3/										
Corn (mil. bu.)	1,504	1,723	2,028	2,367	183	108	168	142	144	183
Feed grains (mil. metric tons) 4/	48.3	52.3	61.3	69.9	5.5	3.5	5.0	4.3	4.2	5.3
	Marketing year 1/				1989	1990				1991
	1986/87	1987/88	1988/89	1989/90	Sept-Nov	Dec-Feb	Mar-May	June-Aug	Sept-Nov	Dec-Feb
Corn										
Stocks, beginning (mil. bu.)	4,040	4,882	4,259	1,930	1,930	7,082	4,812	2,843	1,345	6,940
Domestic use										
Feed (mil. bu.)	4,714	4,805	3,979	4,456	1,494	1,291	1,014	656	1,651	1,375
Food, seed, ind. (mil. bu.)	1,192	1,229	1,245	1,271	298	297	338	338	305	305
Exports (mil. bu.)	1,504	1,723	2,036	2,367	582	682	601	502	383	475
Total use (mil. bu.)	7,410	7,757	7,260	8,114	2,374	2,270	1,970	1,499	2,338	2,155

1/ September 1 for corn & sorghum; June 1 for oats & barley. 2/ Beginning March 1987 reporting point changed from Minneapolis to Duluth. 3/ Includes products. 4/ Aggregated data for corn, sorghum, oats, & barley. — = not available.

Information contact: James Cole (202) 219-0840.

Table 21.—Fats & Oils

	Marketing year *				1989	1990				
	1985/86	1986/87	1987/88	1988/89	Dec	Aug	Sept	Oct	Nov	Dec
Soybeans										
Wholesale price, no. 1 yellow, Chicago (\$/bu.)	5.20	5.03	6.67	7.41	5.74	6.06	6.19	6.09	5.72	5.78
Crushings (mil. bu.)	1,052.9	1,178.8	1,174.5	1,057.7	105.4	92.8	92.1	108.1	106.0	102.7
Exports (mil. bu.)	740.7	756.9	801.6	530.6	66.1	28.3	27.9	29.8	62.8	55.9
Stocks, beginning (mil. bu.)	316.0	536.4	436.4	302.5	108.5	46.9	45.2	34.5	130.1	130.7
Soybean oil										
Wholesale price, crude, Decatur (cts./lb.)	18.02	15.36	22.67	21.09	19.11	25.0	24.5	22.6	21.1	21.6
Production (mil. lb.)	11,617.3	12,783.1	12,974.5	11,737.0	1,911.2	1,059.2	1,038.1	1,188.1	1,188.0	1,138.0
Domestic disp. (mil. lb.)	10,045.9	10,820.2	10,734.1	10,455.6	975.2	1,029.8	795.1	1,211.3	956.6	982.1
Exports (mil. lb.)	1,257.3	1,184.5	1,873.2	1,658.2	173.4	82.5	298.9	85.4	107.2	12.1
Stocks, beginning (mil. lb.)	632.5	946.6	1,725.0	2,092.2	1,532.4	1,433.2	1,380.2	1,324.6	1,215.9	1,320.1
Soybean meal										
Wholesale price, 44% protein, Decatur (\$/ton)	154.88	162.61	221.90	233.46	179.40	172.40	176.90	172.50	163.00	164.80
Production (1,000 ton)	24,951.3	27,758.8	28,060.2	24,942.7	2,519.6	2,237.1	2,187.3	2,508.5	2,513.2	2,431.5
Domestic disp. (1,000 ton)	19,117.2	20,387.4	21,275.9	19,792.5	1,820.6	1,855.9	1,855.8	2,248.9	1,989.9	1,870.3
Exports (1,000 ton)	6,009.3	7,343.0	6,871.0	5,130.8	565.1	316.9	245.3	289.2	600.7	418.7
Stocks, beginning (1,000 ton)	386.9	211.7	240.2	153.5	295.6	267.7	232.0	318.3	290.9	313.6
Margarine, wholesale price, Chicago, white (cts./lb.)	51.2	40.3	40.3	52.3	52.3	62.5	61.9	61.7	61.5	62.9

* Beginning September 1 for soybeans; October 1 for soybean meal & oil; calendar year for margarine.

Note: Census data on which this table is based are now being reported quarterly. Consequently, the next revision of this table will appear in May for the Jan-Mar quarter.

Information contacts: Roger Hoskin (202) 219-0840, Tom Bickerton (202) 219-0824.

Table 22.—Farm Programs, Price Supports, Participation & Payment Rates

	Target price	Loan rate	Findley loan rate	Payment rates			Base acres 1/	Program 2/	Participation rate 3/
				Deficiency	Paid land diversion	PIK			
			\$/bu.			Percent 4/	Mil. acres		Percent of base
Wheat									
1984/85	4.38	3.30	—	1.00	2.70	85	94.0	20/10/10-20	60/60/20
1985/86	4.38	3.30	—	1.08	2.70	—	94.0	20/10/0	73
1986/87 5/	4.38	3.00	2.40	1.98	2.00	1.10	91.0	22.5/2.5/5-10	85/85/21
1987/88	4.38	2.85	2.28	1.81	—	—	87.6	27.5/0/0	88
1988/89	4.23	2.76	2.21	0.69	—	—	84.8	27.5/0/0	88
1989/90	4.10	2.58	2.06	7/ 0.32	—	—	82.3	10/0/0	78
1990/91	4.00	2.44	1.95	1.00	—	—	80.5	* 5/0/0	80
Rice			\$/cwt						
1984/85	11.90	8.00	—	3.76	—	—	4.1	25/0/0	85
1985/86	11.90	8.00	6/ 3.18	3.90	3.50	—	4.2	20/15/0	90
1986/87 5/	11.90	7.20	6/ 3.82	4.70	—	—	4.2	35/0/0	94
1987/88	11.66	6.84	6/ 5.77	4.82	—	—	4.1	35/0/0	96
1988/89	11.15	6.63	6/ 6.30	4.31	—	—	4.1	25/0/0	94
1989/90	10.80	6.50	6/ 6.50	3.56	—	—	4.1	25/0/0	95
1990/91	10.71	6.50	—	3.71	—	—	4.2	20/0/0	92
Corn			\$/bu.						
1984/85	3.03	2.55	—	0.43	—	—	80.8	10/0/0	54
1985/86	3.03	2.55	—	0.48	—	—	84.2	10/0/0	69
1986/87 5/	3.03	2.40	1.92	1.11	—	—	81.7	17.5/2.5/0	86
1987/88	3.03	2.28	1.82	1.09	2.00	—	81.5	20/15/0	90
1988/89	2.93	2.21	1.77	7/ 0.36	1.75	—	82.9	20/10/0; 0/92	87
1989/90	2.84	2.08	1.65	7/ 0.58	—	—	82.7	10/0/0; 0/92	80
1990/91	2.75	1.96	1.57	0.15	—	—	82.7	10/0/0; 0/92	76
Sorghum			\$/bu.						
1984/85	2.88	2.42	—	0.46	—	—	18.4	8/ (same)	42
1985/86	2.88	2.42	—	0.46	—	—	19.3	—	55
1986/87 5/	2.88	2.28	1.82	1.06	0.65	—	19.0	—	75
1987/88	2.88	2.17	1.74	0.82	1.90	—	17.4	—	84
1988/89	2.78	2.10	1.65	0.48	1.65	—	16.8	—	82
1989/90	2.70	1.96	1.57	7/ 0.66	—	—	16.2	—	71
1990/91	2.61	1.86	1.49	0.21	—	—	15.4	—	75
Barley			\$/bu.						
1984/85	2.60	2.08	—	0.52	—	—	11.6	8/ (same)	44
1985/86	2.60	2.08	—	0.52	—	—	13.3	—	57
1986/87 5/	2.60	1.95	1.56	0.99	0.57	—	12.4	—	72
1987/88	2.60	1.86	1.49	0.52	1.60	—	12.6	—	84
1988/89	2.51	1.80	1.44	1.04	1.40	—	12.5	—	79
1989/90	2.43	1.68	1.34	7/ 0.23	—	—	12.4	—	69
1990/91	2.36	1.60	1.28	0.26	—	—	11.9	—	66
Oats			\$/bu.						
1984/85	1.60	1.31	—	0.00	—	—	9.8	8/ (same)	14
1985/86	1.60	1.31	—	0.29	—	—	9.4	—	14
1986/87 5/	1.60	1.23	0.99	0.39	0.36	—	9.2	—	37
1987/88	1.60	1.17	0.94	0.20	0.80	—	8.4	—	45
1988/89	1.55	1.13	0.90	0.30	—	—	7.9	5/0/0; 0/92	30
1989/90	1.50	1.06	0.85	0.00	—	—	7.6	5/0/0; 0/92	23
1990/91	1.45	1.01	0.81	0.00	—	—	7.5	5/0/0; 0/92	10
Soybeans 9/			\$/bu.						
1984/85	—	5.02	—	—	—	—	—	—	—
1985/86	—	5.02	—	—	—	—	—	—	—
1986/87 5/	—	4.77	—	—	—	—	—	—	—
1987/88	—	4.77	—	—	—	—	—	—	—
1988/89	—	4.77	—	—	—	—	—	—	—
1989/90	—	4.53	—	—	—	—	—	10/ 10/25	—
1990/91	—	4.50	—	—	—	—	—	10/ 0/25	—
Upland cotton			Cts./lb.						
1984/85	81.0	55.00	—	18.60	—	—	15.6	25/0/0	70
1985/86	81.0	57.30	—	23.70	30.00	—	15.9	20/10/0	82/0/0
1986/87 5/	81.0	55.00	11/ 44.00	26.00	—	—	15.6	25/0/0	93
1987/88	79.4	52.25	12/ —	17.3	—	—	14.5	25/0/0	93
1988/89	75.9	51.80	12/ —	19.4	—	—	14.5	12.5/0/0	89
1989/90	73.4	50.00	12/ —	13.1	—	—	14.6	25/0/0	89
1990/91	72.9	50.27	12/ —	6.3	—	—	14.5	12.5/0/0	86

1/ Includes planted area plus acres considered planted (ARP, PLD, 0-92 etc.). Net of CRP. 2/ Percentage of base acres that farmers participating in Acreage Reduction Programs/Paid Land Diversion/PIK were required to devote to conserving uses to receive program benefits. 3/ Percentage of base acres enrolled in Acreage Reduction Programs/Paid Land Diversion/PIK. 4/ Percent of program yield, except 1988/87 wheat, which is dollars per bushel. 1984 PIK rates apply only to the 10-20 portion. 5/ Rates for payments received in cash were reduced by 4.3 percent in 1988/87 due to Gramm-Rudman-Hollings. 6/ Annual average world market price. 7/ Guaranteed to farmers signed up for 0/92. 8/ The sorghum, oats, & barley programs were the same as for corn in each year except 1988-90, when the oats ARP was lower than for the other feed grains. 9/ There are no target prices, acreage programs, or payment rates for soybeans. 10/ Soybean program data refer to percent of program crop base permitted to shift into beans without loss of base. 11/ Loan repayment rate. 12/ Loans may be repaid at the lower of the loan rate or world market prices. *On September 13, the Secretary announced that participating farmers have the option of planting up to 105 percent of their wheat base to boost 1990 supplies. For every acre planted in excess of 95 percent of base, the acreage used to compute deficiency payments will be cut by 1 acre. — = not available.

Information contact: James Cole (202) 219-0840.

Table 23.—Fruit

	1982	1983	1984	1985	1986	1987	1988	1989	1990 P
Citrus 1/ Production (1,000 ton)	12,139	13,682	10,832	10,525	11,058	11,993	12,781	13,188	11,539
Per capita consumpt. (lbs.) 2/	24.7	29.4	24.0	22.8	28.0	25.7	27.1	24.4	—
Noncitrus 3/ Production (1,000 tons)	14,858	14,168	14,301	14,181	13,874	16,011	15,303	15,783	14,829
Per capita consumpt. (lbs.) 2/	82.7	83.8	87.5	86.5	89.5	75.1	71.9	72.2	—
	1990							1991	
	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb
F.o.b. shipping point prices									
Apples (\$/carton) 4/	11.28	13.85	19.88	11.95	12.18	13.00	13.08	14.08	14.00
Pears (\$/box) 5/	15.88	—	—	—	—	12.58	13.00	14.00	13.85
Grower prices									
Oranges (\$/box) 6/	7.15	6.02	5.07	5.31	4.48	6.31	6.18	6.82	5.98
Grapefruit (\$/box) 6/	8.74	6.35	6.44	7.22	6.51	5.53	5.83	5.66	4.50
Stocks, ending									
Fresh apples (mil. lbs.)	283.9	118.9	8.8	3,005	4,600.0	4,003.7	3,378.3	2,694.8	2,100.8
Fresh pears (mil. lbs.)	2.3	33.8	199.8	878.0	449.8	322.6	289.2	191.1	145.4
Frozen fruits (mil. lbs.)	653.2	790.8	859.5	864.5	912.7	864.5	838.0	780.7	687.7
Frozen orange juice (mil. lbs.)	1,074.8	1,008.1	808.4	797.1	802.0	871.3	1,031.6	1,195.8	1,241.1

1/ 1990 indicated 1989/90 season. 2/ Fresh per capita consumption. 3/ Calendar year. 4/ Red delicious, Washington, extra fancy, carton try pack, 125's. 5/ D'Anjou, Washington, standard box wrapped, U.S. no. 1, 135's. 6/ U.S. equivalent on-tree returns. P = preliminary. — = not available.

Information contact: Wynnlce Napper (202) 219-0884.

Table 24.—Vegetables

	Calendar year									
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990 P
Production										
Total vegetables (1,000 cwt)	392,343	430,795	403,509	456,334	453,030	448,629	478,381	468,779	542,437	557,088
Fresh (1,000 cwt) 1/ 3/	183,456	193,451	185,782	201,817	203,549	203,165	220,539	228,387	239,281	234,508
Processed (tons) 2/ 3/	10,444,330	11,887,170	10,886,350	12,725,880	12,474,040	12,273,200	12,892,100	12,019,110	15,157,790	16,129,080
Mushrooms (1,000 lbs.)	517,148	490,828	581,531	595,681	587,956	614,393	631,819	667,759	715,010	—
Potatoes (1,000 cwt)	340,823	355,131	333,726	382,039	409,609	381,743	389,320	358,438	370,444	393,887
Sweetpotatoes (1,000 cwt)	12,799	14,833	12,083	12,902	14,573	12,388	11,611	10,945	11,358	13,020
Dry edible beans (1,000 cwt)	32,751	25,563	15,520	21,070	22,175	22,886	26,031	19,253	23,729	32,429
	1990							1991		
	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb
Shipments										
Fresh (1,000 cwt) 4/	35,292	30,291	21,826	22,032	14,898	20,451	17,823	17,112	23,352	19,405
Potatoes (1,000 cwt)	18,062	10,136	8,255	10,029	8,959	11,947	11,405	10,434	14,881	11,322
Sweetpotatoes (1,000 cwt)	288	187	109	101	302	582	929	545	399	400

1/ Includes fresh production of asparagus, broccoli, carrots, cauliflower, celery, sweet corn, lettuce, honeydews, onions, & tomatoes. 2/ Includes processing production of snap beans, sweet corn, green peas, tomatoes, cucumbers (for pickles), asparagus, broccoli, carrots, & cauliflower. 3/ Asparagus & cucumber estimates were not available for 1982 & 1983. 4/ Includes snap beans, broccoli, cabbage, carrots, cauliflower, celery, sweet corn, cucumbers, eggplant, lettuce, onions, bell peppers, squash, tomatoes, cantaloupes, honeydews, & watermelons. — = not available.

Information contacts: Gary Lucier or Cathy Greene (202) 219-0884.

Table 25.—Other Commodities

	Annual					1989		1990		
	1986	1987	1988	1989	1990	Oct-Dec	Jan-Mar	Apr-June	July-Sept	Oct-Dec
Sugar										
Production 1/	6,257	7,309	7,087	6,840	6,319	3,709	1,671	572	652	3,424
Deliveries 1/	7,786	8,187	8,188	8,309	8,831	2,190	1,988	2,048	2,308	2,307
Stocks, ending 1/	3,225	3,195	3,132	2,948	2,642	2,933	3,112	2,165	1,210	2,642
Coffee										
Composite green price N.Y. (cts./lb.)	185.18	109.14	115.59	95.17	76.93	83.70	73.22	78.55	79.10	78.85
Imports, green bean equiv. (mil. lbs.) 2/	2,590	2,638	2,072	2,630	2,714	725	868	702	530	618
	Annual				1989	1990				
	1987	1988	1989	Aug	Mar	Apr	May	June	July	Aug
Tobacco										
Prices at auctions 3/										
Flue-cured (\$/lb.)	1.59	1.61	—	—	—	—	—	—	—	—
Burley (\$/lb.)	1.58	1.61	—	—	—	—	—	—	—	—
Domestic consumption 4/										
Cigarettes (bil.)	675.0	562.5	540.1	47.2	48.6	45.3	47.2	45.9	38.8	49.9
Large cigars (mil.)	2,728	2,531	2,467.6	220.3	198.5	174.2	205.0	221.6	164.4	210.8

1/ 1,000 short tons, raw value. Quarterly data shown at end of each quarter. 2/ Net imports of green & processed coffee. 3/ Crop year July-June for flue-cured. Oct.-Sept. for burley. 4/ Taxable removals. — = not available.

Information contacts: sugar, Peter Buzzanell (202) 219-0886, coffee, Fred Gray (202) 219-0888, tobacco, Verner Glee (202) 219-0890.

World Agriculture

Table 26.—World Supply & Utilization of Major Crops, Livestock, & Products

	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90 P	1990/91 F
Million units							
Wheat							
Area (hectares)	231.2	229.6	228.2	220.0	218.0	225.5	230.3
Production (metric tons)	511.9	500.1	530.7	502.3	500.4	537.0	560.1
Exports (metric tons) 1/	107.0	85.0	90.7	105.0	98.9	98.5	92.9
Consumption (metric tons) 2/	493.0	498.2	522.5	530.3	531.0	535.0	565.4
Ending stocks (metric tons) 3/	164.4	188.2	178.4	148.4	116.9	118.9	143.6
Coarse grains							
Area (hectares)	334.6	341.3	336.6	324.4	326.1	321.0	320.1
Production (metric tons)	816.8	843.1	831.9	794.7	732.1	800.4	826.0
Exports (metric tons) 1/	100.4	83.2	83.3	83.2	94.5	100.4	85.0
Consumption (metric tons) 2/	782.6	778.8	806.1	815.2	796.8	824.7	825.9
Ending stocks (metric tons) 3/	143.9	208.2	234.0	213.6	148.9	124.5	124.6
Rice, milled							
Area (hectares)	144.2	144.9	145.3	141.6	145.5	146.5	146.8
Production (metric tons)	318.9	318.9	318.7	314.2	330.9	344.0	349.1
Exports (metric tons) 4/	11.3	12.6	12.9	11.9	15.1	12.2	12.4
Consumption (metric tons) 2/	310.2	319.4	322.7	320.0	328.6	338.0	346.6
Ending stocks (metric tons) 3/	56.0	55.4	51.4	45.6	48.0	54.1	56.5
Total grains							
Area (hectares)	710.0	715.8	710.0	688.0	689.6	693.0	697.2
Production (metric tons)	1,646.6	1,662.1	1,681.3	1,611.2	1,563.4	1,681.4	1,765.2
Exports (metric tons) 1/	218.7	180.8	186.9	200.1	206.5	209.1	190.3
Consumption (metric tons) 2/	1,585.8	1,594.4	1,651.3	1,665.5	1,657.4	1,697.7	1,737.9
Ending stocks (metric tons) 3/	364.3	431.8	461.8	407.6	313.8	297.5	324.7
Oilseeds							
Crush (metric tons)	150.7	155.1	161.4	167.7	166.2	173.4	177.6
Production (metric tons)	191.1	196.2	194.4	209.6	203.7	214.3	218.1
Exports (metric tons)	33.1	34.5	37.7	39.5	32.0	35.7	33.5
Ending stocks (metric tons)	21.1	26.8	23.3	24.0	22.2	23.5	24.8
Meals							
Production (metric tons)	101.8	105.0	110.5	115.1	112.1	117.8	119.7
Exports (metric tons)	32.3	34.4	36.7	36.2	38.2	38.8	38.6
Oils							
Production (metric tons)	46.2	49.4	50.3	53.2	53.8	57.4	58.4
Exports (metric tons)	15.6	16.4	16.9	17.7	16.4	20.1	19.2
Cotton							
Area (hectares)	33.9	31.7	29.6	31.1	33.8	31.7	33.6
Production (bales)	89.0	80.8	70.9	81.3	84.7	79.9	87.0
Exports (bales)	20.3	20.3	26.0	23.2	25.8	24.0	24.0
Consumption (bales)	69.2	77.3	82.8	84.5	85.6	87.0	86.0
Ending stocks (bales)	44.4	48.3	36.0	32.8	31.6	24.9	25.5
	1985	1986	1987	1988	1989	1990 P	1991 F
Red meat							
Production (metric tons)	103.6	106.6	109.6	113.4	115.2	114.4	116.1
Consumption (metric tons)	101.6	105.4	107.9	111.7	113.8	113.8	115.0
Exports (metric tons) 1/	6.3	6.7	6.6	6.9	7.2	6.5	6.6
Poultry 5/							
Production (metric tons)	26.2	29.3	31.3	32.9	34.1	35.7	37.2
Consumption (metric tons)	25.8	28.9	30.8	32.5	33.8	35.2	36.8
Exports (metric tons) 1/	1.2	1.2	1.5	1.7	1.8	2.0	2.1
Dairy							
Milk production (metric tons)	413.4	425.9	425.9	429.1	434.8	441.0	443.4

1/ Excludes intra-EC trade. 2/ Where stocks data not available (excluding USSR), consumption includes stock changes. 3/ Stocks data are based on differing marketing years & do not represent levels at a given date. Data not available for all countries; includes estimated change in USSR grain stocks but not absolute level. 4/ Calendar year data. 1985 data correspond with 1984/85, etc. 5/ Poultry excludes the Peoples Republic of China before 1986. P = preliminary. F = forecast.

Information contacts: Crops, Carol Whitton (202) 219-0824; red meat & poultry, Linda Bailey (202) 219-1285; dairy, Sara Short (202) 219-0770.

U.S. Agricultural Trade

Table 27.—Prices of Principal U.S. Agricultural Trade Products

	Annual			1990					1991	
	1988	1989	1990	Feb	Sept	Oct	Nov	Dec	Jan	Feb
Export commodities										
Wheat, f.o.b. vessel, Gulf ports (\$/bu.)	3.97	4.65	3.72	4.41	3.14	3.16	3.09	3.10	3.05	3.13
Corn, f.o.b. vessel, Gulf ports (\$/bu.)	2.73	2.85	2.79	2.71	2.60	2.55	2.56	2.63	2.71	2.74
Grain sorghum, f.o.b. vessel, Gulf ports (\$/bu.)	2.52	2.70	2.65	2.59	2.52	2.50	2.51	2.60	2.68	2.72
Soybeans, f.o.b. vessel, Gulf ports (\$/bu.)	7.81	7.08	6.24	6.05	6.45	6.33	6.09	6.13	6.03	6.08
Soybean oil, Decatur (cts./lb.)	23.52	20.21	22.75	20.54	23.89	22.09	20.75	21.26	21.42	21.48
Soybean meal, Decatur (\$/ton)	234.75	216.59	169.37	161.80	175.79	172.49	163.81	164.79	156.38	164.01
Cotton, 8—market avg. spot (cts./lb.)	57.25	63.78	71.25	65.03	71.01	70.54	69.48	69.92	70.51	77.69
Tobacco, avg. price at auction (cts./lb.)	153.61	151.56	164.61	160.54	170.20	168.82	169.86	170.09	171.81	171.70
Rice, f.o.b. mill, Houston (\$/cwt)	19.80	15.88	15.52	15.69	14.50	14.50	14.50	14.50	14.50	16.00
Inedible tallow, Chicago (cts./lb.)	16.64	14.71	13.54	14.50	12.00	13.25	14.09	14.25	14.43	12.99
Import commodities										
Coffee, N.Y. spot (\$/lb.)	1.21	1.04	0.81	0.76	0.87	0.85	0.80	0.82	0.82	0.80
Rubber, N.Y. spot (cts./lb.)	59.20	50.65	46.28	45.75	48.43	48.50	48.28	47.03	47.47	48.92
Cocoa beans, N.Y. (\$/lb.)	0.69	0.55	0.55	0.45	0.59	0.57	0.58	0.56	0.55	0.53

Information contact: Mary Teymourian (202) 219-0824.

Table 28.—Indexes of Real Trade-Weighted Dollar Exchange Rates¹

	1990								1991		
	May	June	July P	Aug P	Sept P	Oct P	Nov P	Dec P	Jan P	Feb P	Mar P
	1985 = 100										
Total U.S. trade 2/	66.8	67.3	65.5	63.4	63.1	61.1	60.5	61.5	61.8	60.9	60.5
Agricultural trade											
U.S. markets	78.6	79.0	79.3	79.2	78.5	76.6	76.2	77.2	77.3	76.6	76.1
U.S. competitors	77.8	77.5	76.5	76.2	75.3	75.8	75.5	76.6	77.0	76.8	76.9
Wheat											
U.S. markets	89.6	90.4	93.6	96.6	96.2	95.5	95.2	97.2	97.5	97.4	97.4
U.S. competitors	76.4	75.6	73.5	72.3	70.8	70.7	71.1	71.8	71.3	71.0	71.1
Soybeans											
U.S. markets	69.5	69.9	68.4	67.0	66.1	64.0	63.5	64.5	64.7	63.7	63.1
U.S. competitors	69.2	66.9	63.9	63.7	58.2	61.1	60.6	62.2	62.4	62.6	62.9
Corn											
U.S. markets	73.4	74.0	74.7	73.8	72.3	70.0	69.6	70.9	71.0	70.0	69.4
U.S. competitors	75.8	74.5	71.1	69.6	65.2	64.5	64.3	65.1	65.8	65.6	65.7
Cotton											
U.S. markets	76.9	77.6	76.5	76.0	74.9	73.2	73.0	74.4	74.4	73.7	73.4
U.S. competitors	83.0	81.5	83.3	90.2	89.0	88.1	86.2	85.7	84.9	84.1	83.2

1/ Real indexes adjust nominal exchange rates for differences in rates of inflation, to avoid the distortion caused by high-inflation countries. A higher value means the dollar has appreciated. See the October 1988 issue of Agricultural Outlook for a discussion of the calculations and the weights used. 2/ Federal Reserve Board Index of trade-weighted value of the U.S. dollar against 10 major currencies. Weights are based on relative importance in world financial markets P = preliminary.

Information contact: Tim Baxter, David Stallings (202) 219-0718.

Table 29.—Trade Balance

	Fiscal year 1/								Jan
	1984	1985	1986	1987	1988	1989	1990	1991 F	1991
	\$ million								
Exports									
Agricultural	38,027	31,201	26,312	27,876	35,316	39,637	40,182	37,000	3,218
Nonagricultural	170,014	179,236	179,291	202,911	258,656	301,222	325,928	—	28,491
Total 2/	208,041	210,437	205,603	230,787	293,972	340,859	366,110	—	31,709
Imports									
Agricultural	18,916	19,740	20,884	20,650	21,014	21,477	22,514	22,500	1,930
Nonagricultural	297,738	313,722	342,846	387,374	409,138	441,074	458,147	—	37,685
Total 3/	316,652	333,462	363,730	388,024	430,152	462,551	480,661	—	39,615
Trade balance									
Agricultural	19,111	11,461	5,428	7,226	14,302	18,160	17,668	14,500	1,288
Nonagricultural	-127,722	-134,486	-163,556	-164,463	-150,482	-139,852	-132,219	—	-9,164
Total	-108,611	-123,025	-158,127	-157,237	-136,180	-121,692	-114,551	—	-7,906

1/ Fiscal years begin October 1 & end September 30. Fiscal year 1990 began Oct. 1, 1989 & ended Sept. 30, 1990. 2/ Domestic exports including Department of Defense shipments (F.A.S. value). 3/ Imports for consumption (customs value). F = forecast. — = not available.

Information contact: Stephen MacDonald (202) 219-0822.

Table 30.—U.S. Agricultural Exports & Imports

	Fiscal year*			Jan	Fiscal year*			Jan
	1989	1990	1991 F	1991	1989	1990	1991 F	1991
	1,000 units				\$ million			
EXPORTS								
Animals, live (no.) 1/	758	685	—	97	475	361	—	44
Meats & preps., excl. poultry (mt)	869	876	2/ 700	80	2,355	2,457	—	232
Dairy products (mt) 1/	192	92	—	2	475	348	400	19
Poultry meats (mt)	428	567	600	53	510	631	—	60
Fats, oils, & greases (mt)	1,377	1,264	1,100	84	531	459	—	32
Hides & skins incl. furskins	—	—	—	—	1,713	1,796	—	143
Cattle hides, whole (no.) 1/	26,260	24,777	—	2,087	1,360	1,365	—	113
Mink pelts (no.) 1/	3,073	5,128	—	613	91	116	—	6
Grains & feeds (mt)	114,692	112,987	—	7,452	16,829	15,694	3/12,600	942
Wheat (mt)	37,641	27,999	26,500	1,809	6,004	4,209	4/3,000	188
Wheat flour (mt)	1,176	882	1,000	52	255	203	—	10
Rice (mt)	3,041	2,501	2,400	170	955	829	700	51
Feed grains, incl. products (mt)	60,958	60,510	54,800	4,272	7,374	8,093	6,000	464
Feeds & fodders (mt)	11,086	11,125	6/11,500	1,058	1,849	1,826	—	173
Other grain products (mt)	790	970	—	91	514	665	—	56
Fruits, nuts, & preps. (mt)	2,555	2,873	—	223	2,394	2,789	—	204
Fruit juices incl.	—	—	—	—	—	—	—	—
froz. (1,000 hectoliters) 1/	4,997	5,975	—	489	264	328	—	26
Vegetables & preps. (mt)	1,665	2,243	—	204	1,542	2,079	—	197
Tobacco, unmanufactured (mt)	212	220	200	20	1,274	1,373	1,400	116
Cotton, excl. linters (mt)	1,441	1,666	1,800	216	2,040	2,704	3,000	364
Seeds (mt)	511	576	—	70	607	576	600	95
Sugar, cane or beet (mt)	368	447	—	42	134	187	—	18
Oilseeds & products (mt)	21,052	23,772	—	2,148	6,629	5,098	5,600	534
Oilseeds (mt)	14,562	17,703	—	1,621	4,363	4,246	—	388
Soybeans (mt)	14,093	17,217	15,400	1,580	4,085	3,939	3,500	360
Protein meal (mt)	4,963	4,767	—	444	1,358	1,022	—	86
Vegetable oils (mt)	1,498	1,302	—	84	908	830	—	59
Essential oils (mt)	13	14	—	1	171	192	—	18
Other	106	89	—	9	1,802	2,120	—	175
Total	145,481	147,686	131,000	10,604	39,637	40,182	37,000	3,218
IMPORTS								
Animals, live (no.) 1/	2,485	2,940	—	294	740	1,053	1,100	104
Meats & preps., excl. poultry (mt)	1,091	1,142	—	93	2,432	2,848	—	227
Beef & veal (mt)	668	754	750	64	1,525	1,842	1,800	154
Pork (mt)	371	340	370	25	778	888	1,000	64
Dairy products (mt) 1/	211	254	—	15	834	951	900	54
Poultry & products 1/	—	—	—	—	130	129	—	9
Fats, oils, & greases (mt)	14	19	—	3	14	15	—	1
Hides & skins, incl. furskins 1/	—	—	—	—	241	135	—	11
Wool, unmanufactured (mt)	62	47	—	6	319	187	—	27
Grains & feeds (mt)	3,467	3,471	3,500	238	1,139	1,181	1,200	89
Fruits, nuts, & preps., excl. juices (mt)	5,036	5,331	5,300	459	2,269	2,486	—	233
Bananas & plantains (mt)	3,039	3,236	3,200	255	851	926	1,000	73
Fruit juices (1,000 hectoliters) 1/	27,747	33,922	30,000	2,401	792	1,001	—	54
Vegetables & preps. (mt)	2,217	2,242	—	267	1,959	2,264	2,100	226
Tobacco, unmanufactured (mt)	169	193	180	17	521	588	600	54
Cotton, unmanufactured (mt)	13	30	—	2	8	20	—	2
Seeds (mt)	158	171	170	20	187	164	200	16
Nursery stock & cut flowers 1/	—	—	—	—	466	519	—	46
Sugar, cane or beet (mt)	1,657	1,769	—	178	620	734	—	73
Oilseeds & products (mt)	1,917	2,034	—	161	948	964	1,000	76
Oilseeds (mt)	424	534	—	28	159	206	—	11
Protein meal (mt)	359	310	—	29	65	48	—	4
Vegetable oils (mt)	1,133	1,189	—	104	721	710	—	62
Beverages excl. fruit juices (1,000 hectoliters) 1/	13,967	13,543	—	789	1,815	1,867	—	112
Coffee, tea, cocoa, spices	1,867	2,202	3,200	218	3,899	3,485	—	353
Coffee, incl. products (mt)	1,084	1,290	1,200	129	2,467	1,997	2,000	207
Cocoa beans & products (mt)	564	698	650	67	969	1,042	1,000	101
Rubber & allied gums (mt)	927	840	850	62	1,051	712	700	51
Other	—	—	—	—	1,097	1,229	—	114
Total	—	—	—	—	21,477	22,514	22,500	1,930

* Fiscal years begin Oct. 1 and end Sept. 30. Fiscal year 1990 began Oct. 1, 1989 and ended Sept. 30, 1990. 1/ Not included in total volume and also other dairy products for 1989 & 1990. 2/ Forecasts for footnoted items 2/-6/ are based on slightly different groups of commodities. Fiscal 1990 exports of categories used in the 1991 forecasts were 2/ 676,000 m. tons. 3/ 16,014 million. 4/ 4,426 million l.s. Includes flour. 5/ 11,065 million m. tons. F = forecast. — = not available.

Information contact: Stephen MacDonald (202) 219-0822.

Table 31.—U.S. Agricultural Exports by Region

Region & country	Fiscal year*			Jan	Change from year* earlier			Jan
	1989	1990	1991 F	1991	1989	1990	1991 F	1991
	\$ million				Percent			
WESTERN EUROPE	7,074	7,331	7,300	710	-12	4	0	-13
European Community (EC-12)	6,565	6,838	6,800	667	-12	4	0	-13
Belgium-Luxembourg	431	431	—	36	1	0	—	-26
France	474	489	—	54	-16	-1	—	3
Germany, Fed. Rep.	918	1,096	—	100	-28	19	—	-11
Italy	609	704	—	70	-15	16	—	-6
Netherlands	1,847	1,837	—	146	-12	-11	—	-24
United Kingdom	736	761	—	72	-10	3	—	0
Portugal	307	338	—	32	-10	10	—	25
Spain, incl. Canary Islands	876	991	—	110	3	13	—	-25
Other Western Europe	510	493	500	43	-2	-3	0	-12
Switzerland	166	171	—	17	-14	3	—	7
EASTERN EUROPE	422	533	500	22	-24	26	0	-71
German Dem. Rep.	72	58	—	0	8	-20	—	-100
Poland	45	101	—	5	-73	127	—	-79
Yugoslavia	76	129	—	2	-26	69	—	-67
Romania	62	210	—	7	-33	239	—	-80
USSR	3,299	3,989	1,600	137	70	-9	-47	-59
ASIA	18,677	18,131	16,600	1,402	17	-3	-8	-12
West Asia (Mideast)	2,273	1,995	1,800	96	19	-12	0	-41
Turkey	238	259	—	11	97	9	—	-57
Iraq	791	497	0	0	8	-37	-100	-100
Israel, incl. Gaza & W. Bank	331	285	—	23	-1	-14	—	-3
Saudi Arabia	482	502	600	32	4	4	20	7
South Asia	1,161	729	—	25	44	-37	—	-88
Bangladesh	213	125	—	4	98	-41	—	1,372
India	243	115	—	16	-31	-53	—	33
Pakistan	599	391	200	0	117	-35	-50	-99
China	1,496	909	700	38	144	-39	-22	-57
Japan	8,148	8,106	7,900	664	12	-1	-8	-3
Southeast Asia	976	1,184	—	145	-4	21	—	28
Indonesia	216	277	—	41	-9	28	—	58
Philippines	344	351	400	28	0	2	0	-3
Other East Asia	4,623	5,207	4,600	434	7	13	-12	-5
Taiwan	1,584	1,818	1,600	163	1	14	-11	-4
Korea, Rep.	2,453	2,703	2,300	193	9	10	-15	-19
Hong Kong	575	685	700	78	18	19	0	72
AFRICA	2,280	2,009	1,700	175	0	-12	-15	-8
North Africa	1,796	1,524	1,300	140	8	-15	-13	-12
Morocco	216	166	—	14	12	-23	—	-3
Algeria	549	488	500	48	2	-11	0	-12
Egypt	955	761	700	71	21	-20	-13	-7
Sub-Saharan	483	484	400	35	-21	0	0	15
Nigeria	30	32	—	3	-31	7	—	27
Rep. S. Africa	57	81	—	7	-34	43	—	-28
LATIN AMERICA & CARIBBEAN	5,437	5,156	5,000	407	24	-5	-2	1
Brazil	149	105	200	15	-15	-30	100	240
Caribbean Islands	1,007	1,006	—	78	16	0	—	-8
Central America	448	484	—	27	8	4	—	-30
Colombia	139	147	—	14	-22	6	—	-15
Mexico	2,755	2,686	2,500	219	60	-3	-7	11
Peru	81	187	—	12	-54	132	—	-64
Venezuela	587	345	400	20	-2	-41	33	105
CANADA	2,179	3,716	4,000	338	10	71	8	4
OCEANIA	268	317	300	28	13	18	0	4
Total	39,637	40,182	38,500	3,218	12	1	-4	-14
Developed countries	17,997	19,780	20,100	1,766	1	10	1	-6
Less developed countries	16,423	15,970	15,300	1,255	14	-3	-11	-8
Centrally planned countries	5,217	4,431	3,100	197	68	-15	-34	-61

* Fiscal years begin Oct. 1 & end Sept. 30. Fiscal year 1990 began Oct. 1, 1989 & ended Sept. 30, 1990. F = forecast — = not available.
 Note: Adjusted for transshipments through Canada.

Information contact: Stephen MacDonald (202) 219-0822.

Farm Income

Table 32.—Farm Income Statistics

	Calendar year										
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990 F	1991 F
	\$ billion										
1. Farm receipts	144.1	147.2	141.3	147.1	149.4	140.2	147.5	155.9	166.5	174	171 to 176
Crops (incl. net CCC loans)	72.5	72.3	67.2	69.9	74.3	63.7	65.6	71.4	75.4	78	77 to 81
Livestock	69.2	70.3	69.6	72.9	69.8	71.5	76.0	78.8	83.7	89	85 to 89
Farm related 1/	2.5	4.6	4.5	4.3	5.3	5.0	5.9	5.7	7.4	8	6 to 7
2. Direct Government payments	1.9	3.5	9.3	8.4	7.7	11.8	16.7	14.5	10.9	9	8 to 10
Cash payments	1.9	3.5	4.1	4.0	7.6	8.1	8.6	7.1	9.1	8	8 to 9
Value of PIK commodities	0.0	0.0	5.2	4.5	0.1	3.7	10.1	7.4	1.7	1	0 to 1
3. Total gross farm income (4+5+6) 2/	166.3	163.5	153.2	170.2	162.9	156.5	169.0	173.8	189.2	194	190 to 195
4. Gross cash income (1+2)	146.0	150.8	150.8	155.5	157.2	152.0	164.3	170.4	177.5	183	180 to 185
5. Nonmoney income 3/	13.8	14.3	13.5	8.7	8.0	6.9	7.5	7.5	7.3	8	7 to 9
6. Value of inventory change	6.5	-1.4	-10.9	6.0	-2.3	-2.4	-2.8	-4.1	4.4	4	1 to 4
7. Cash expenses 4/	113.2	112.8	111.0	119.0	109.3	105.2	108.2	112.3	122.8	125	124 to 130
8. Total expenses	139.4	140.0	137.9	143.8	131.9	125.5	127.7	132.1	142.8	145	146 to 151
9. Net cash income (4-7)	32.8	37.9	39.5	36.6	47.9	46.7	56.1	58.1	54.8	58	53 to 58
10. Net farm income (3-8)	26.9	23.5	15.3	26.3	31.0	31.0	41.3	41.8	46.7	49	42 to 47
Deflated (1982\$)	28.6	23.5	14.7	24.5	27.9	27.3	35.2	34.4	36.9	37	31 to 34
11. Off-farm income	35.8	36.4	37.0	39.2	55.2	54.5	56.9	57.7	57.5	—	—
12. Loan changes 5/: Real estate	9.0	3.8	2.3	-2.0	-6.4	-8.7	-7.7	-4.1	-2.1	—	—
13. 5/: Non-real estate	6.5	3.4	0.9	-0.8	-9.8	-11.0	-4.6	-0.3	0.1	—	—
14. Rental income plus monetary change	6.4	6.4	5.4	9.2	9.1	8.0	8.8	7.5	8.2	—	—
15. Capital expenditures 5/	16.8	13.3	12.7	12.5	9.2	8.5	11.1	11.1	13.0	—	—
16. Net cash flow (9+12+13+14-15)	37.8	38.2	35.3	30.4	31.9	26.6	39.5	50.2	48.0	—	—

1/ Income from machine hire, custom work, sales of forest products, & other miscellaneous cash sources. 2/ Numbers in parentheses indicate the combination of items required to calculate a given item. 3/ Value of home consumption of self-produced food & imputed gross rental value of farm dwellings. 4/ Excludes capital consumption, perquisites to hired labor, & farm household expenses. 5/ Excludes farm households. Total may not add because of rounding. F = forecast. — = not available.

Information contact: Diane Bertelsen (202) 219-0809.

Table 33.—Balance Sheet of the U.S. Farming Sector

	Calendar year 1/										
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990 F	1991 F
	\$ billion										
Assets											
Real estate	784.7	748.8	758.2	810.3	540.8	507.3	525.4	555.4	577.6	595	600 to 610
Non-real estate	197.7	196.4	181.9	196.9	187.5	182.8	183.7	208.1	216.3	223	220 to 230
Livestock & poultry	53.5	53.0	49.5	49.5	46.3	47.8	58.0	65.5	69.7	74	74 to 78
Machinery & motor vehicles	87.0	87.5	87.4	86.0	83.8	81.9	79.4	80.6	83.8	86	85 to 89
Crops stored 2/	29.0	26.1	24.9	26.2	22.9	18.7	18.0	23.0	23.5	23	21 to 25
Purchased inputs	—	—	—	2.6	1.3	2.0	3.3	3.4	2.8	3	2 to 4
Financial assets	28.2	29.7	30.9	32.8	33.3	34.5	35.1	35.4	36.6	38	36 to 40
Total farm assets	982.4	945.2	950.1	807.2	728.3	690.1	719.1	763.5	793.9	818	825 to 835
Liabilities											
Real estate debt 3/	98.7	102.5	104.8	102.8	96.4	87.7	79.9	75.8	73.8	72	70 to 74
Non-real estate debt 4/	83.6	87.0	87.9	87.1	77.5	66.6	62.0	61.7	61.8	62	60 to 64
Total farm debt	182.3	189.5	192.7	189.9	173.9	154.2	142.0	137.6	135.6	134	131 to 137
Total farm equity	800.1	755.7	757.4	617.4	554.3	535.9	577.2	625.9	658.3	684	695 to 705
	Percent										
Selected ratios											
Debt-to-assets	18.6	20.0	20.3	23.5	23.9	22.4	19.7	18.0	17.1	16	16 to 17
Debt-to-equity	22.8	25.1	25.4	30.8	31.4	28.8	24.6	22.0	20.6	20	19 to 20
Debt-to-net cash income	556	500	488	519	363	330	253	237	248	228	230 to 240

1/ As of Dec. 31. 2/ Non-CCC crops held on farms plus value above loan rates for crops held under CCC. 3/ Excludes debt on operator dwellings, but includes CCC storage and drying facilities loans. 4/ Excludes debt for nonfarm purposes. F = forecast.

Information contacts: Ken Erickson or Jim Ryan (202) 219-0798.

Table 34.—Cash Receipts From Farm Marketings, by State

Region & State	Livestock & Products				Crops 1/				Total 1/			
	1989	1990	Dec 1990	Jan 1991	1989	1990	Dec 1990	Jan 1991	1989	1990	Dec 1990	Jan 1991
	\$ million 2/											
NORTH ATLANTIC												
Maine	215	214	27	19	233	226	19	21	447	439	45	40
New Hampshire	63	63	5	6	79	78	6	5	142	141	11	11
Vermont	375	391	28	29	51	52	3	3	426	443	31	31
Massachusetts	112	112	9	10	317	297	27	25	429	409	36	35
Rhode Island	13	13	1	1	66	66	9	3	79	79	11	4
Connecticut	186	190	16	17	218	237	15	32	404	426	31	49
New York	1,946	2,005	152	144	911	941	85	56	2,857	2,945	237	199
New Jersey	197	200	17	17	463	478	30	20	660	678	47	37
Pennsylvania	2,595	2,707	249	206	986	1,076	103	132	3,681	3,783	352	338
NORTH CENTRAL												
Ohio	1,698	1,872	154	148	2,114	2,251	217	240	3,812	4,123	371	388
Indiana	1,817	2,048	158	162	2,502	2,848	312	280	4,318	4,896	470	442
Illinois	2,252	2,568	269	177	4,458	5,324	377	821	6,710	7,892	646	998
Michigan	1,313	1,432	113	104	1,627	1,713	193	174	2,940	3,145	307	278
Wisconsin	4,337	4,576	336	319	941	1,047	98	75	5,278	5,622	434	393
Minnesota	3,716	4,082	358	295	2,809	3,174	401	400	6,526	7,256	759	694
Iowa	5,209	6,048	664	586	3,911	4,469	322	610	9,119	10,516	986	1,196
Missouri	2,188	2,401	185	222	1,732	1,835	122	190	3,900	4,037	307	411
North Dakota	642	685	49	78	1,465	1,775	179	247	2,108	2,459	228	324
South Dakota	2,108	2,352	328	208	884	1,046	104	93	2,992	3,399	432	300
Nebraska	5,643	6,042	576	530	2,878	2,623	277	425	8,521	8,664	853	955
Kansas	4,245	4,508	402	435	2,079	2,182	219	247	6,324	6,690	621	682
SOUTHERN												
Delaware	503	462	36	39	160	183	10	6	663	645	46	45
Maryland	870	857	58	86	476	503	33	27	1,346	1,360	91	113
Virginia	1,372	1,434	88	88	685	718	53	40	2,058	2,152	141	129
West Virginia	250	249	18	18	64	65	6	4	314	314	24	21
North Carolina	2,505	2,550	224	199	2,046	2,164	111	63	4,551	4,714	335	262
South Carolina	551	567	45	50	675	584	39	28	1,225	1,150	84	76
Georgia	2,270	2,200	159	182	1,598	1,568	99	67	3,869	3,768	258	248
Florida	1,221	1,289	98	102	4,982	4,240	396	605	6,203	5,529	494	707
Kentucky	1,670	1,774	110	145	1,258	1,414	276	347	2,928	3,188	387	492
Tennessee	1,060	1,164	110	95	861	908	118	105	1,921	2,072	228	199
Alabama	1,932	1,940	128	151	896	667	57	31	2,828	2,607	185	181
Mississippi	1,292	1,288	91	111	1,000	1,099	167	129	2,292	2,387	257	240
Arkansas	2,661	2,537	170	206	1,470	1,543	156	172	4,131	4,080	326	379
Louisiana	614	636	43	41	1,048	1,266	240	144	1,661	1,902	283	185
Oklahoma	2,409	2,604	171	212	1,185	1,135	54	99	3,594	3,739	225	311
Texas	6,863	7,494	546	629	3,897	4,016	440	489	10,760	11,510	986	1,118
WESTERN												
Montana	899	915	78	70	710	749	70	72	1,610	1,664	148	142
Idaho	1,046	1,107	99	92	1,670	1,703	164	114	2,715	2,810	263	206
Wyoming	869	719	71	50	186	159	27	12	856	879	98	62
Colorado	2,649	2,803	246	221	1,250	1,176	119	120	3,899	3,979	365	341
New Mexico	974	1,050	72	63	450	450	40	23	1,424	1,500	112	87
Arizona	744	782	76	75	1,158	1,004	148	129	1,902	1,785	222	205
Utah	574	603	52	45	174	168	17	15	748	771	68	60
Nevada	141	141	10	12	94	100	11	10	235	241	21	22
Washington	1,201	1,308	101	98	2,438	2,447	227	254	3,639	3,752	327	351
Oregon	739	779	60	60	1,558	1,532	112	93	2,297	2,311	172	153
California	5,093	5,301	544	409	12,422	11,729	884	748	17,515	17,030	1,428	1,158
Alaska	9	9	1	1	20	20	2	1	29	29	3	2
Hawaii	92	92	8	8	495	491	41	41	587	583	49	48
UNITED STATES	83,724	89,161	7,608	7,270	75,449	77,535	7,233	8,080	159,173	166,696	14,841	15,350

1/ Sales of farm products include receipts from commodities placed under CCC loans minus value of redemptions during the period. 2/ Estimates as of end of current month. Totals may not add because of rounding.

Information contact: Roger Strickland (202) 219-0806.

Table 35.—Cash Receipts From Farming

	Annual						1990					1991
	1985	1986	1987	1988	1989	1990	Jan	Sept	Oct	Nov	Dec	Jan
	\$ million											
Farm marketings & CCC loans*	144,114	135,197	141,853	150,192	159,173	168,898	15,071	14,541	19,055	17,157	14,841	15,350
Livestock & products	89,822	71,539	76,010	78,821	83,724	88,181	7,494	7,682	8,250	8,051	7,608	7,270
Meat animals	38,550	39,081	44,478	45,884	48,591	51,893	4,206	4,543	5,279	5,021	4,698	4,447
Dairy products	18,055	17,724	17,727	17,841	19,401	20,158	1,823	1,861	1,583	1,494	1,519	1,415
Poultry & eggs	11,209	12,701	11,817	12,867	15,348	14,900	1,288	1,268	1,231	1,226	1,240	1,225
Other	2,008	2,034	2,288	2,429	2,386	2,352	177	211	157	311	151	183
Crops	74,293	63,658	65,643	71,372	78,449	77,535	7,577	8,859	10,805	9,108	7,233	8,080
Food grains	8,990	5,741	5,780	7,464	8,073	7,966	743	724	723	690	482	744
Feed crops	22,581	18,912	14,543	14,305	18,658	18,991	2,310	1,096	2,789	2,254	1,798	2,451
Cotton (lint & seed)	3,887	3,371	4,189	4,548	4,740	5,067	538	316	699	1,018	993	762
Tobacco	2,699	1,921	1,826	1,960	2,381	2,701	355	486	420	438	318	389
Oil-bearing crops	12,475	10,814	11,294	13,537	12,172	12,432	1,365	1,067	3,088	1,837	1,074	1,469
Vegetables & melons	8,572	8,849	9,889	9,754	11,340	11,176	924	1,263	1,178	552	493	755
Fruits & tree nuts	8,948	7,248	8,058	8,139	9,020	7,978	815	842	951	841	828	781
Other	8,333	9,002	10,084	10,865	11,088	11,223	727	966	979	1,579	1,250	729
Government payments	7,704	11,813	16,747	14,480	10,887	9,067	388	119	24	1,825	1,817	52
Total	151,818	147,010	158,400	164,672	170,060	175,763	15,459	14,422	19,079	18,782	16,658	15,402

*Receipts from loans represent value of commodities placed under CCC loans minus value of redemptions during the month.

Information contact: Roger Strickland (202) 219-0808.

Table 36.—Farm Production Expenses

	Calendar year										
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990 F	1991 F
	\$ million										
Feed	20,855	18,592	20,371	20,239	17,247	17,875	17,958	20,620	22,722	22,000	20,000 to 23,000
Livestock	8,999	9,684	8,818	9,486	9,184	9,758	11,842	12,812	12,983	14,000	13,000 to 15,000
Seed	3,428	3,172	2,690	3,386	3,128	3,188	3,259	3,268	3,733	4,000	3,000 to 5,000
Farm-origin inputs	33,282	31,447	31,879	33,112	29,559	30,821	33,059	36,700	39,438	40,000	38,000 to 42,000
Fertilizer	9,409	8,018	8,959	8,574	7,508	8,813	8,453	8,775	7,554	7,000	6,000 to 9,000
Fuels & oils	8,570	7,734	7,211	7,296	6,438	5,310	4,957	4,921	5,321	6,000	5,000 to 7,000
Electricity	1,747	2,041	1,982	2,060	1,878	1,795	2,158	2,231	2,100	2,000	2,000 to 3,000
Pesticides	4,201	4,282	3,870	4,688	4,334	4,324	4,512	4,443	5,721	6,000	5,000 to 7,000
Manufactured inputs	23,927	22,078	20,022	22,618	20,153	18,242	18,077	18,370	20,697	21,000	21,000 to 23,000
Short-term interest	10,722	11,349	10,815	10,396	8,735	7,920	7,305	7,287	7,480	7,000	7,000 to 8,000
Real estate interest 1/	9,142	10,481	10,815	10,733	9,878	9,131	8,187	7,885	7,643	7,000	6,000 to 8,000
Total interest charges	19,864	21,830	21,430	21,129	18,613	17,052	15,492	15,172	15,123	14,000	14,000 to 15,000
Repair & maintenance 1/ 2/	7,021	6,428	6,529	6,730	6,556	6,485	6,828	6,889	7,794	8,000	8,000 to 10,000
Contract & hired labor	8,831	10,075	9,725	9,729	9,799	9,890	10,821	11,202	11,887	12,000	11,000 to 13,000
Machine hire & custom work	1,984	2,025	2,213	2,566	2,354	2,099	2,105	2,271	2,739	3,000	2,000 to 4,000
Marketing, storage, & transportation	3,523	4,301	3,904	4,012	4,127	3,852	3,988	3,281	4,214	5,000	4,000 to 6,000
Misc. operating expenses 1/	8,909	7,262	9,089	9,136	8,198	8,054	8,902	9,357	9,857	10,000	10,000 to 12,000
Other operating expenses	28,369	30,089	31,461	32,173	31,034	30,180	32,644	33,000	36,491	38,000	37,000 to 41,000
Capital consumption 1/	23,573	24,287	23,873	21,823	19,648	17,709	16,475	16,718	17,310	18,000	18,000 to 20,000
Taxes 1/	4,246	4,050	4,123	4,186	4,484	4,549	4,982	5,090	5,328	5,000	5,000 to 6,000
Net rent to nonoperator landlord	8,184	8,174	5,110	8,978	8,435	8,651	8,964	7,014	8,181	9,000	8,000 to 10,000
Other overhead expenses	34,003	34,511	33,106	34,787	32,567	29,209	28,420	28,820	30,819	32,000	31,000 to 35,000
Total production expenses	138,444	139,954	137,897	143,819	131,926	125,803	127,893	132,063	142,566	145,000	146,000 to 151,000

1/ Includes operator dwellings. 2/ Beginning in 1982, miscellaneous operating expenses include other livestock purchases & dairy assessments. Totals may not add because of rounding. F = forecast.

Information contacts: Chris McGath (202) 219-0804, Diane Bertelsen (202) 219-0809.

Table 37.—CCC Net Outlays by Commodity & Function

COMMODITY/PROGRAM	Fiscal year									
	1983	1984	1985	1986	1987	1988	1989	1990	1991 E	1992 E
	\$ million									
Feed grains										
Corn	5,720	-934	4,403	10,524	12,346	8,227	2,863	2,450	2,364	2,665
Grain sorghum	814	78	483	1,185	1,203	764	467	361	298	262
Barley	268	89	336	471	394	57	45	-93	53	125
Oats	11	5	2	26	17	-2	1	-5	14	16
Corn & oat products	2	6	7	5	7	7	8	8	5	5
Total feed grains	6,815	-758	5,211	12,211	13,967	9,053	3,384	2,721	2,737	3,073
Wheat	3,419	2,536	4,691	3,440	2,836	678	53	806	2,647	2,519
Rice	664	333	990	947	906	128	631	667	618	775
Upland cotton	1,363	244	1,553	2,142	1,786	666	1,461	-79	389	623
Tobacco	880	346	455	253	-346	-453	-367	-307	-217	-85
Dairy	2,528	1,502	2,085	2,337	1,166	1,295	679	505	665	392
Soybeans	288	-585	711	1,597	-476	-1,676	-86	5	22	-21
Peanuts	-6	1	12	32	8	7	13	1	3	-3
Sugar	49	10	184	214	-65	-246	-25	16	0	-26
Honey	48	90	81	89	73	100	42	47	46	25
Wool	94	132	109	123	152	1/ 5	93	104	175	175
Operating expense 3/	328	362	346	457	535	614	620	618	721	773
Interest expenditure	3,525	1,064	1,435	1,411	1,219	425	98	632	604	480
Export programs 4/	398	743	134	102	276	200	-102	-34	1,256	1,053
1989/89 Disaster/										
Livestock Assistance	0	0	0	0	0	0	3,919 2/	161	91	0
Other	-1,542	1,295	-314	486	371	1,695	110	609	690	1,126
Total	18,851	7,315	17,683	25,841	22,408	12,461	10,523	6,471	10,844	11,079
FUNCTION										
Price-support loans (net)	8,438	-27	6,272	13,628	12,199	4,579	-926	-399	201	458
Direct payments 5/										
Deficiency	2,780	612	6,302	6,166	4,833	3,971	5,798	4,178	6,117	6,574
Diversification	705	1,504	1,525	64	382	6	-1	0	0	0
Dairy termination	0	0	0	489	587	260	168	189	100	11
Other	0	0	0	27	60	0	42	3	12	12
Disaster	116	1	0	0	0	6	4	0	0	0
Total direct payments	3,600	2,117	7,827	6,746	6,662	4,245	6,011	4,370	6,229	6,597
1988/89 crop disaster	0	0	0	0	0	0	3,386	2/ 5	5	0
Emergency livestock/										
forage assistance	0	0	0	0	0	31	533	156	86	0
Purchases (net)	2,540	1,470	1,331	1,670	-479	-1,131	116	-48	381	512
Producer storage										
payments	964	268	329	485	832	658	174	185	26	0
Processing, storage,										
& transportation	665	639	657	1,013	1,659	1,113	659	317	305	202
Operating expense 3/	328	362	346	457	535	614	620	618	721	773
Interest expenditure	3,525	1,064	1,435	1,411	1,219	425	98	632	604	480
Export programs 4/	398	743	134	102	276	200	-102	-34	1,256	1,053
Other	-1,607	679	-648	329	305	1,727	-46	669	1,030	1,004
Total	18,851	7,315	17,683	25,841	22,408	12,461	10,523	6,471	10,844	11,079

1/ Fiscal 1988 wool & mohair program outlays were \$130,635,000 but include a one-time advance appropriation of \$128,108,000, which was recorded as a wool program receipt by Treasury. 2/ Approximately \$1.6 billion in benefits to farmers under the Disaster Assistance Act of 1989 were paid in generic certificates & were not recorded directly as disaster assistance outlays. 3/ Does not include CCC Transfers to General Sales Manager. 4/ Includes Export Guarantee Program, Export Guarantee Program—Credit Reform, Direct Export Credit Program, Market Promotion Program, & CCC Transfers to the General Sales Manager. 5/ Includes cash payments only. Excludes payment-in-kind in fiscal 83-85 & generic certificates in fiscal 86-90. E = Estimated in the fiscal 1992 President's Budget based on November, 1990 supply & demand estimates. Minus (-) indicates a net receipt (excess of repayments or other receipts over gross outlays of funds).

Indicators of Farm Productivity

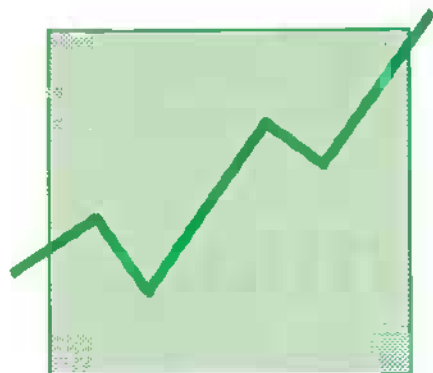
Table 40.—Indexes of Farm Production Input Use & Productivity¹

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990 2/
	1977=100									
Farm output	118	118	98	112	118	111	110	102	114	117
All livestock products 3/	109	107	109	107	110	110	113	116	116	117
Meat animals	108	101	104	101	102	100	102	105	104	101
Dairy products	108	110	114	110	117	116	116	118	117	120
Poultry & eggs	119	119	120	123	129	133	144	148	153	165
All crops 4/	117	117	88	111	118	109	108	92	107	112
Feed grains	121	122	87	116	134	123	106	73	108	112
Hay & forage	106	109	100	107	106	106	102	89	101	101
Food grains	144	138	117	129	121	107	107	98	107	136
Sugar crops	107	98	93	95	97	106	111	105	105	106
Cotton	109	85	55	91	94	89	103	107	86	102
Tobacco	108	104	75	90	81	63	62	72	71	84
Oil crops	114	121	91	106	117	110	108	89	106	102
Cropland used for crops	102	101	88	99	98	94	88	87	90	—
Crop production per acre	118	116	100	112	120	116	123	106	119	—
Farm input 5/	102	99	96	96	92	89	89	87	98	—
Farm real estate	104	102	101	99	97	96	95	94	93	—
Mechanical power & machinery	98	92	89	86	80	77	73	72	73	—
Agricultural chemicals	129	118	102	120	115	109	111	111	122	—
Feed, seed, & livestock purchases	108	107	103	106	102	110	117	110	119	—
Farm output per unit of input	116	117	99	117	128	124	124	117	128	—
Output per hour of labor										
Farm 6/	123	125	99	121	139	139	142	134	148	—
Nonfarm 7/	100	99	102	105	106	108	109	111	112	—

1/ For historical data & indexes, see Economic Indicators of the Farm Sector: Production & Efficiency Statistics, 1986, ECIFS 5-6. 2/ Preliminary indexes for 1990 based on Crop Production: 1990 Summary, released in January 1991, & unpublished data from the Agricultural Statistics Board, NASS. 3/ Gross livestock production includes minor livestock products not included in the separate groups shown. It cannot be added to gross crop production to compute farm output. 4/ Gross crop production includes some miscellaneous crops not in the separate groups shown. It cannot be added to gross livestock production to compute farm output. 5/ Includes other items not included in the separate groups shown. 6/ Economic Research Service. 7/ Bureau of Labor Statistics. — = not available.

Information contact: Jim Hauver (202) 219-0432.

OUTLOOK '91 CHARTS



Order a special book of the charts presented at USDA's 67th Agricultural Outlook Conference held in Washington, D.C., November 1990.

This publication carries more than 200 charts and tables used by Conference speakers. Each chart, measuring 4 x 6 inches, is ready for easy reproduction or use in overhead transparencies.

Order the ***All New***
OUTLOOK '91 CHARTS
\$8.00 (\$10.00 foreign, includes Canada)
for each copy

Yes! Send me _____ copies of *Outlook '91 Charts* (AGES-9101)

Mail to: ERS-NASS
P.O. Box 1608
Rockville, MD
20849-1608

Name _____

Organization _____

Address _____

City, State, Zip Code _____

Daytime telephone number _____

- Use purchase orders, checks drawn on U.S. banks, cashier's checks, or international money orders.

- Make payable to ERS-NASS.

☐ Bill me: ☐ Enclosed is \$ _____ Credit card: ☐ MasterCard ☐ VISA Total charges \$ _____

Credit card number:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Expiration date:

--	--

Month/Year

For *fastest* service, call our order desk toll free, 1-800-999-6779
(8:30-5:00 ET, in U.S. and Canada;
all other areas, please call 301-725-7937)

OFFICIAL BUSINESS
Penalty for Private Use, \$300

FIRST-CLASS MAIL
POSTAGE & FEES PAID
U.S. Dept. of Agriculture
Permit No. G-145

Moving? To change your address, send this sheet with label intact, showing new address, to EMS Information, Rm. 228, 1301 New York Ave., N.W., Washington, D.C. 20005-4788

What's Your Subscription Situation?

Your subscription to *Agricultural Outlook* expires in the month and year shown on the top line of your mailing label. The expiration date will appear in one of two formats: FEB91 (for February 1991) or 910430 (for April 30, 1991). Disregard this notice if no renewal date appears. Renew today by calling, toll free, 1-800-999-6779, or return this form with your mailing label attached.

Agricultural Outlook Renewal

☐ Bill me.

Domestic


1 Year

\$26.00

2 Years

☐ \$51.00

3 Years

 \$75.00

☐ Enclosed is \$_____.

Foreign

	\$32.50
--	---------

☐ \$63.75

☐ \$93.75

Mail to: ERS-NASS
P.O. Box 1608
Rockville, MD 20849-1608

Use purchase orders, checks drawn on U.S. banks, cashier's checks, or international money orders. **Make payable to ERS-NASS.**

ATTACH MAILING LABEL HERE

Credit Card Orders:

Master Card



Total charges \$ _____

Credit card number:

[illegible]

**Credit card
expiration date:**

Month/Year

--	--

For fastest service, call toll free, 1-800-999-6779 (8:30-5:00 ET)